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MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

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JOHN THOMSON AND J. F. THOMSON, M.A.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

EDITED BY

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MIND

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OF

PSYCHOLOGY AND PHILOSOPHY.

I.—ON PLEASURE, PAIN, DESIRE AND VOLITION.

By F. H. BRADLEY.

THE object of this paper is to indicate briefly the nature of Pleasure and Pain, Desire and Volition. Its limits and its methods are those, I hope, of strict empirical psychology,[1] but within these limits it will be understood that I cannot even touch upon all parts of the subject. And for this reason I must give to points of disagreement a space out of due proportion. Those who know the subject will know both the amount of substantial agreement among psychologists, and again how very little in what follows is specially mine. I must first very rapidly sketch the main features of Pleasure and Pain, then go on to Desire, and in conclusion try to seize the essence of Volition. And I am forced to warn the reader that my present limits compel me to count

[1] I have tried to define these in MIND xii. 354. There are two main errors to be avoided. The first makes the soul a mere serial collection of states. The second treats it as a thing somehow outside psychical phenomena, which can be acted on and can react. The second mistake becomes aggravated when this thing is called the Ego. I will use this opportunity to thank Mr. Ward for the space which (in MIND No. 48) he has given to a refutation of my views. I regret that inability to identify myself with the doctrines which he has criticised has deprived me throughout of any profit from his labours.

upon a greater effort from him than I ought, perhaps, to expect.

I.

To say that what we call sensations in *every* case must be coloured by pain or pleasure is to go beyond our knowledge; but without sensation we never have pleasure or pain. Not a pleasure, but something pleasant is what we experience, and the actual fact is an event which, together with duration, has quality and tone, and an intensity of each. If we like to apply the term aspect, or side, or moment, these are all open to objection, as metaphors must be. But what they try to say is that, as a sensation is not, as a matter of fact, a thing given separate from its psychical context, so pain and pleasure do not exist apart from sensation, any more than duration or intensity are ever discovered by themselves. They are all alike presentations,[1] as being elements within the presented whole. They are all of them distinctions, and we might call them, all alike, the creatures of our attention. Indeed pains and pleasures have no qualities of their own. It is the quality of the sensations, or arrangements of sensations, which we place to their credit. The kinds of pain which have been urged in disproof of the above, the feelings that shoot or that burn or gnaw, are each due to the special sort of sensation, or again to the temporal and the spatial orders of sensations, together with the rhythm of intensity in the pain. Thus pain and pleasure are mere aspects of mere psychical fact. They exist and they say nothing. Like sensations they are at first neither objective nor subjective. If I say that they are given simply, a subtle critic may object that given means sent to an Ego with another Ego's compliments, and that, if I were capable of knowing what I meant, I should inevitably mean this. Still I shall use the word, and for myself must decline the interpretation. That pleasure or pain, as they come first, have, in any sense whatever, a reference to the Ego is a fundamental error. It takes the products of development and places them at the starting-point, where no Ego (conscious or unconscious, whether for the soul or for the observer) exists except in false theory. In addition I would remark that even now there is no reference to the subject in

[1] I know of no argument for refusing this name to pleasure and pain which does not rest upon some dogmatic preconception. Suppose (*e.g.*) that they are not *essential* to presentation, does that go to show—when their (physical or psychical) conditions produce them—that they are not presented? Are warmth and cold not presented?

some of our æsthetic pains and pleasures, and that there may never have been one. I would add further that in moments of agony (as happens too before unconsciousness in swooning and under anæsthetics) it is most doubtful if Ego or non-Ego exists. Of course the phrases we *must* use imply what exists at our phrase-making level, but these implications are no argument against the existence of lower levels. To say 'I felt myself all one pain' is perhaps an attempt to deny the self which it asserts; as in—

> "First 'twas fire in her breast and brain,
> And then scarce hers but the whole world's pain,
> As she gave one shriek and sank again".

In short, of themselves pleasure and pain merely *are;* they have no meaning and no reference; they are at first certainly mere aspects of sensible quality, just as sensible quality, where their conditions exist, is a mere aspect of them.[1]

If we go on to ask for their physical conditions, they are taken to be connected one with physical benefit and one with injury. Whether they should be called accompaniments or results I shall not inquire; but whether the connexion is without exceptions must be considered. First, however, there are mistakes which we must place on one side. Pain and pleasure are not the feelings *of* anything at all, in the sense that they report it or in any way convey it (MIND xi. 419). Again, they clearly cannot go *always* with a general heightening and lowering of our vital forces, actual or even potential. Nor, further, is it possible to connect them with the *general* advantage or the *general* injury of the creature which feels them, unless that connexion is subject to most serious exceptions. We have to ask, then, if in any sense pleasure always goes with benefit and pain with injury. Lotze[2] has pointed out a way of answering in the affirmative. If the advantage and the harm are momentary and local, the exceptions might disappear. For example, a sweet poison does not injure by its sweetness, it rather locally so far benefits; and thus contrariwise with pains. And Feeling, like the thermometer, tells what *is* now and not what will be hereafter. If this is true, then the law would be valid universally. What would remain unexplained would be the want of correspondence in some cases between the quantities of pleasure and benefit, and so again with pain. But

[1] I include *uneasiness* under the head of pain. As to the Ego, cp. MIND xii. 365-6.

[2] *Med. Psych.*, 1852, pp. 237-9.

I must leave this matter as it stands; and, again, the possible genetic derivation and development of the law cannot here be discussed.[1]

Can pleasure and pain (at least with regard to mere sensations) be connected simply with the quantity of the stimulus?[2] Certainly too much of anything might always be painful, but whether with everything there is a too-much is far from certain, nor is it certain that the painful, if one only could have less of it, would always become pleasant before it wholly ceased to be. And, without discussing views which I have no room to state, I will say simply that (so far as our knowledge goes at present, and without prejudice to the future) we cannot avoid connecting pleasure with sensible *quality*.

If we pass now to the *psychical* conditions of pleasure, all the result which so far we are able to take with us, is the connexion of pain with damage and of pleasure with the opposite. We must see if on the psychical side more is visible. Can we say that pleasure is the result or the attendant of activity, and does pain again go with a hindered energy? First, I must remark that I do not know, and that I still am not ashamed of not knowing, what "activity" means; but, speaking subject to that ignorance, I find the assertion not verifiable. There are surely pleasures and pains where to find what we should commonly call psychical activity is out of the question. And if the faculty of Apperception or Attention, or again the Ego, is appealed to, I cannot say that I am shaken. Such a thoroughly retrograde step will hardly take us to anything beyond baseless assertions and illusory explanations (MIND xii. 366). But if we are to keep to what we observe, and take an instance where we pass suddenly from a pleasant warmth to a painful heat, we cannot see that the hindrance of psychical activity makes the transition to pain. The pain appears to come given to us by a physical cause; there seems neither to have been nor to be a particular psychical activity in the case; and to take the activity as general (if there is general activity) would not account for the special seat of the pain.

[1] Mr. Spencer appears not to be acquainted with Lotze's view. I understand Mr. Spencer to hold that pleasure may attend that which is in no other sense whatever good for the individual. He seems also to deny the existence of an intrinsic connexion between advantage and pleasure, and to believe only in a conjunction made by circumstances. If so, I think he much underrates the amount and kind of evidence wanted for such a conclusion.

[2] On this see Wundt. Horwicz (*Psychol. Analyses*), seems to me to have shown Wundt's failure, but to have also failed himself.

I shall assume, then, for the present that the conditions of *some* pleasure and *some* pain are not psychical,[1] and, leaving mere sensible feelings, shall examine those which attend psychical movements or dispositions. The two main conditions appear here to be harmony and expansion, and we are at once led to ask whether, as was the case with the intellect, these two characters will fall under a single head (MIND xii. 376). I will begin the inquiry from the side of pain. There it seems to me that discord is the one constant feature. Mere loss, mere contraction of psychical existence, never pains us by itself. It does so only when some element feels itself thwarted or diminished, and for that we must have positive reaction and tension. If from the world which is dear to me you could isolate one fraction and extirpate it wholly, with all its memories and connexions, then I should never feel the loss of it. It is where the element with its connexions is left in part, and so reacts, that it becomes the seat of pain. Wherever we have pains whose origin does not seem physical, there we find a collision and a struggle of elements; and wherever we make a collision, which is not rapidly arranged or subordinated, there we can always find pain. It is true that pains and pleasures, not of psychical origin, may enter into and even occasion the tension, as when the idea or the remaining smart of a wound makes the tension of fear, or the removal of some dainty the struggle of disappointment. It is quite true that a collision often goes with pleasure on the whole, because the state, taken on the whole, is not a state of struggle, but contains the discord as an overpowered element. But it remains true that, so far as pain is not in its origin physical, it arises with tension, and that, wherever you have collision, you so far must have pain. And I cannot think that Prof. Bain is right in setting down surprise as a neutral state, even in the special sense which he assigns to the word "neutral" (MIND xii. 577). It may of course be even pleasant, but if you take it as bare surprise, that is, apart from any supervening apperception and expansion, it seems certainly painful. If we then accept the result that the psychical origin of pain is tension, can we extend this view to cases where the origin seemed physical? It seems possible, first, that in such pain there is an unconscious psychical conflict, a collision of psychical states, an inroad and a resistance. But the objection is that, though possible, such a view lacks evidence.

[1] The assertion of the opposite would in my opinion rest upon mere dogmatic preconception.

The existence of the unconscious struggling element would be a serious assumption and one not called for. It is far otherwise if we say that *all* pain comes from tension, either physical or psychical, and in the former case from the alteration and the resistance of a physical condition. So far as I know, this is a view which physiology can sanction, and, if so, pain in all cases may be set down to discord.

Passing now to the conditions of pleasure, we may expect to find the opposite. I do not say that we *must* find the exact counterpart of discord; but, if we did not, we should be discouraged. Pleasure, we said, seems to accompany both harmony and expansion, and there is a question whether both will fall under one head. Let us try first with expansion. There is no doubt that in general a mere increase of the psychical area seems pleasant, and no doubt again that as a recovery the increase is usually more pleasant. Can we say, then, that pleasure *always* comes from an expansion, or from a maintenance which against an opposite is really an increase? If so, harmony, as the removal or the overpowering of discord, would fall under expansion. To go so far as to call pleasure pain's mere negative would be an obvious absurdity. But, for all that, a precedent or a suppressed element might always be essential, and pleasure be dependent because a counter- if not a re-assertion. Or, if not that, yet perhaps the conditions, which would have gone on to pain, must be in part there for pleasure. Considered psychically, we may urge that every incoming sensation is at least to a certain extent an attack which necessitates reaction, and physiologically the stimulus required for the pleasant discharge may be taken as an invasion. Hence in both cases the positive will be really an expansion. In harmony too the variety is still negative against the unity. And in the mere "relativity" of pains and pleasures an unanswerable proof seems found, for there a pain, because a recovery, becomes actually a pleasure. Briefly then, if pain is felt hindrance, a pleasure is felt furtherance against defect or opposition, and in either case is expansion; or, if you prefer a modification, it is always a counter- or a re-assertion. Is such a view the correct one?

I am not prepared to deny this, but, as before with activity, it is necessary to make assumptions quite beyond our real knowledge, or else to put an indefensible strain on the facts. It is not possible to find always a sense of defect as the condition of pleasant expansion. Again in some pleasures, *e.g.*, of smell, it is often impossible to verify a tension. Further pleasures and pains are not wholly relative.

And lastly, if expansion *per se* were pleasant, then mere contraction should be painful, which assuredly it is not. I shall return to these objections, but will first attempt to state a view which, though not free from difficulty, seems to interpret the facts with the use of less force. If pain is discord, pleasure may be taken as the opposite. But, if the opposite is harmony, then harmony is ambiguous, since it may imply either the overpowering of collision or its simple absence. And if the latter is an improper use of the term, let us by all means drop the word harmony. Let us say, pleasure is the feeling which goes with presentation when that has not got the conditions of pain. A sensation is pleasant when not psychically or physiologically discordant. Pleasure thus will be the result of such positive conditions as imply the absence of pain. It will be the attendant either of *all* normal sensations, or of merely those where its (unknown) conditions of quantity or quality are present. The absence of hindrance does not constitute the pleasure, pleasure is essentially positive; but there would be no *inconsistency* in adding that its conditions must contain a variety—which *is* not painful but might become so if altered in character through quantity or quality.

Such a view seems to me to include all the facts, and it explains at once the pleasure of expansion. For, if mere positive sensation is *per se* pleasant, then more of the same will be naturally more pleasant. Expansion will make more of the same where the state was pleasure, or turn the scale where pleasure and pain were balanced. Just as increase of sugar is not sweet as mere increase but as presence of more sugar, so will it be with sensation; and expansion will be reduced to the head of mere position. And the same principle explains the pleasure of harmony proper. This enables us to have more of what already is pleasant, or to have without tension and with a balance of pleasure what would otherwise become painful. And we will now weigh our objection against the view that expansion *per se* is pleasant. We said that, if so, contraction should be painful *per se*, and *per se* it is not painful. It is painful only through repression and the tension of what is forced in. If we take the state where in full comfort a creature falls asleep, there its psychical area is progressively diminished, but it feels no beginning of pain. You may say that in repose other functions are set free, other sensations and also ideas come into being, while others are intensified, and that the change adds to the pleasure, so that in repose the soul might even be fuller than before. I admit all this, but if we keep to our crucial example of an

animal which normally falls asleep after a healthy meal, it is all too little for the purpose. With every possible admission, it remains still a monstrous paradox to say either that the psychical contents do not diminish or that the animal suffers pain. And, if so, contraction is not painful *per se*. It is painful where the removed survives still in idea, or is recalled and struggles for existence. And I admit further that this is usual. But where the idea fails, there contraction is not noticed. It becomes *bare* contraction and ceases at once to give pain. And I would press this strongly against the doctrine that expansion *per se* can be pleasant.

But our view that pleasure arises from unhindered position has to meet greater difficulties. We shall be told that pleasure is never pure, but that pain is of its essence, either as precedent or ingredient. I reply that, even were there no pure pleasure, yet the impurity might be external, like insoluble dirt in water. And secondly I deny the fact. I repeat the classical example of pleasures without want, where, if we keep to what is verifiable, we cannot find pain. And the fact again that in infancy (according to Preyer) pains come before pleasures seems to be without relevance, even if it were shown (as it is not shown) that in each case the special pain comes before the special pleasure. If we next go on to compare different levels of psychical life, we cannot find that the different balances of pleasure are merely in proportion to the contrasts which those lives contain. That a life monotonous, but without pain or care, could not at a low level be pleasant, seems to me a mere paradox, the offspring and again the parent of error. And I think such mistakes bring no real danger to our view. Its main difficulty arises from the pains of mere contrast and the pleasures of relief. It will be urged that one and the same state may be pleasant or painful because of its relations; that in pain, if I remember my yesterday's torment, my state becomes pleasant, and that my pleasure, if I think of all that I once hoped, may be turned to pain. How, if pleasure comes from what is positive, can these facts be explained?

The explanation is not easy, but still I think it is practicable, and there are three points to be considered. In the first place, the physical conditions may be so altered as to give an opposite result. In the second place, in the result we may have new positive sensations. In the third place, we must allow for the influence of ideas. I will apply these considerations to the case where the commonly painful is now pleasant. (1) In the first place, our physical state may be so changed that the conditions of pain are in consequence

not present. Where there is no discord there will be no pain. And this is true again psychically; for what was painful, because it jarred, may by the suppression of its antagonist have lost its painfulness. (2) In the second place, though the pain remains actually present, it may be overbalanced by new pleasure. In partial relief we may still have pain there: but its *diminution* has set free those normal sensations and ideas, both from a physical and psychical source, the conditions of which were suppressed before by the greater pain.[1] The state may on the whole therefore be pleasant, and the fact that, if the pain were being increased rather than diminished, it would overbalance the pleasure though the amounts were the same, is on our view quite normal. For it is the *newness* of the pleasant sensations, as they rise, which directs attention upon them, so that they preponderate and depress the rest which is painful. And, if the pain were increasing, its novelty would for the same reason overbalance the pleasure.[2]

These principles will explain a large part of the facts, but they do not explain everything. For, if we take a case where the state of relief continues, it may cease to be pleasant. Habituation to pain has limits, and on the other hand our healthy sensations lose freshness and get feeble. We become depressed, and the balance of our state is pain. Yet even here, if we remember a worse pain behind, our state once more may be pleasure; which, if pleasure is really positive, seems inexplicable. (3) Here we must fall back on our third principle—the influence of ideas. The idea of pleasure is itself a positively pleasant fact, and can so turn the scale. I will explain this briefly. It should be a commonplace that ideas are psychical realities, and we cannot represent without using a psychical fact. Further, what represents a pain must be a pain, and so again with pleasure. It is not true that the idea of the greater pleasure or greater pain must itself be a stronger pleasure or pain (MIND ix. 289), but to think of a pain or a pleasure without *in some degree* feeling them is quite impossible. That is the first point. The second point is that, though pleasures and pains are not "relative," our ideas of them are largely so. We think of feeling as a series, a scale which rises or falls from agony to delight; and in this scale more or less of pain or pleasure stands for less or more of the

[1] Volkmann, *Lehrbuch der Psychologie*, §§ 70, 71.

[2] Why novelty attracts attention, whether from a psychical or only a physical cause, I cannot discuss.

opposite. This way of thinking is to some extent a downright illusion, but it comes inevitably.

In our experience we pass frequently from pleasure to pain and from pain to pleasure—and, where this happens, the circumstance is usually one to which we attend. Beside other reasons for this which we noticed above, we must remember that, if pleasure removed survives in idea, this produces discord, and that in desire satisfied pleasure often comes after sharp pain. From all this comes a tendency to place pleasure and pain on one scale. Further it is familiar that, in passing from one sensation to another, the first is used in idea to interpret the second, so that our standard may be nothing but our last experience. Hence, judging by the difference which separates two sensations, and not remarking that the former was far removed from the average, we constantly exaggerate. And so the relief from pain which really in itself is still painful, is, because so far from what we suffered, figured as the opposite of that, and not as its mere absence. It seems the other extreme, and that in our experience has been pleasure. Taking this into consideration, I hope the reader will agree that our ideas become comparative, though our bare sensations of pain and of pleasure are not so.

But if the idea of relief is the idea of a pleasure, and if the idea is also fact, we can solve the problem of a painful condition which is pleasant. The idea of past pain is painful, but its degree, as a fact, is here inconsiderable. On the other hand, in passing from what it represents to our actual painful condition, the divergence is so great that our present state is judged to be something opposite. It thus (apart from hope) is thought pleasant, and the idea or thought, as we saw, is an actual pleasure. Now this idea at once works both in proportion to its detail and also its degree.[1] It not only in itself is an ingredient of pleasure and tends to neutralise pain, but it acts positively in setting free what pain was suppressing, and again in intensifying the sensations which agree with its content.[2] In this sphere what *seems*, *is*. And it is idle to object that to mistake a pain for a pleasure is impossible. For the question is not of a simple pleasure or pain, the question is as to the balance in a mixed state; and there an error is both easy, and in addition goes on to make itself a truth. We need not appeal to cases of

[1] Lotze (*Mikrokosmus*, i. 231), is, I think, wrong here.

[2] The idea creates its reality by blending with a *basis* in sensation, and then forcing the rest (MIND, xii. 379).

enthusiasm or mental weakness. We may see every day persons who feel well and happy when they are led so to think themselves, and who feel the opposite as soon as the opposite is suggested.[1] And it is, I think, clear that in the lower animals, where ideas can act less, the relief from pain affords also less pleasure. In short, our opinions may be relative when the facts are not so. And I venture to offer this with the foregoing as a solution of our problem, and in defence of the doctrine that pleasure is positive.

Finally, if the extreme doctrine of "relativity" is brought in, and I am told that all sensation must depend on change and contrast, and that what is not relative (or even a relation?) is nothing, in that case I still refuse to allow, apart from special evidence, that pleasure is dependent on pain. But I shall admit that its conditions involve an opposite, in this sense that they contain a reassertion or even an expansion. But mere expansion will still not be pleasant *per se*. It will still be a principle that is subordinate to harmony. And harmony will be taken, not as simple position with the absence of discord, but as the positive unity which contains and overpowers opposites. I venture, however, to think that our former view explains facts with less setting up of our ignorance in the place of knowledge.

If we pass now from the conditions to the results of pleasure and pain, the first doubt which meets us is whether they exist. Just as it may be denied that pain or pleasure is ever produced by sensations or their relations, so it may be maintained that what at first seemed to be their effects is really due to other causes, and that the connexion is indirect. I do not think that in either case a disproof is possible, but probability is on the side of the doctrine that pains and pleasures can be produced, and also do react. But how they react, and what is the character of their influence in general, is open to doubt. I shall first state the opinion which seems to me most true, and shall then try to defend it. Mr. Leslie Stephen's view[2] is that pleasure represents equilibrium, a state in which there is a tendency to persist, and pain tension, a state from which there is a tendency to change. That is, I believe, substantially the view to which I had before been independently led, and which

[1] Preyer (*Seele des Kindes*, p. 76) has verified the fact that children can be made through suggestion to take a disagreeable taste for an agreeable one. He very properly illustrates from hypnotic states in the adult. There is of course error here, but so far as the idea has altered the sensation, there will not be a mistake about the sensation itself.

[2] *Science of Ethics*, p. 51.

(in MS. only) I had expressed thus: "The generalisation nearest the facts would seem to be, (1) Pleasure is conservative—of rest or motion, (2) Pain alterative". I should now prefer to put it thus: The action of pleasure is to make the pleasant both dominant and steady, while the action of pain is to excite change away from what is painful —a statement which will require considerable explanation. I must call attention at once to an important distinction. In the action of the pleasant, and again of the painful, we have to separate the specific from the non-specific influence. *Every* incoming mental state can first act as a shock, and produce mainly a suppression of our existing state of mind and a lowering of all functions. Again, it may act as a stimulus, and call forth indirectly a current of new sensations and ideas. And, lastly, intensity or duration may lead to exhaustion, either local or general. None of these effects, to say the least, is *always* specific. They need arise neither from pain nor from pleasure as such; and I will go on to point out what in my opinion does so arise and really is essential. If we take a psychical state and then suppose it to become pleasant, we observe that this state seems to usurp more mental space. It drives other states out, and lowers the relative intensity of those which remain. It weakens again the attack of fresh incoming states. Certainly to say that pleasure is intensity would be to me a mere paradox, and to say that all their effects are identical would be little better. But, so far as causing both persistence and dominance, pleasure seems to work like strength. And for this reason pleasure causes both motion and rest. Where the sensations or ideas are those which would produce motion, if sufficiently strong, pleasure takes the place of intensity and effects its result (see below). It does not move at all *per se;* it moves, or it prevents movement, on one and the same principle and merely *per accidens.* Once more, pleasure seems to produce movement by raising the whole tone, and by thus rendering the subject, so to speak, explosive; in such a state, that is, that on a stimulus movement follows with ease and plentifully. But this again involves no new principle. For in the first place the pleasure is to some extent a symptom, and is itself the effect of the general bodily condition. And, where it is the cause, it acts merely as intensity might act. It supports first of all the suggestions or the actual beginnings of change. In the next place, by adding strength without bringing collision, it causes an expansion of our general area which by itself is excitement. To this point I would direct the reader's

special attention. The ordinary effect of any strong incoming psychical state is to produce a movement, and this tendency is not dependent on the pleasantness or painfulness of the state. What is true of the infant is true of every living creature, that every strong feeling tends to bring on a motor discharge.[1] Hence, where pleasure produces movement, its action is indirect. For, where the states which it emphasises are connected with repose, by the same action it supports them against suggestions of movement, and its indirect effect is rest. Finally, where the pleasant exhausts and so decreases change, the same principle holds good. Either its action is not specific and it works simply as an intense and enduring state of mind, or else once more its specific action produces a particular effect the same as that which would result from mere quantity of a particular suggestion.

If now we turn to pain, we must be careful still to discount those results which are not specific. Avoiding these we find its effect to be change and restlessness. It appears to move us *per se*, whatever may be its quantity. To the apparent exceptions I will return, and must attempt first of all to get clear on the principle. I said that pain excited change away from what is painful, and I must try to state this accurately. What seems most probable is that pain, coming from discord and conflict, reacts to make that more intense. The restless movements, in which the elements (physical or psychical), press and struggle against each other, become more violent, and that which reacts is stimulated to movements stronger and more extended in range. Hence a change which may result in the suppression of the source of disturbance. The line taken by this change will be either, so to speak, mechanical, or furnished by remedial associated movements. I see no good cause to suppose that pain has a direct negative action upon its source. The point to keep in mind is this, that, if the changes fail to remove the pain, the disturbance is continued and extended and intensified; while, if the stimulation is removed, the movements die away, and the resulting condition is stable. Pain may on the other hand indirectly increase its cause and itself. For, if the reactive movements are unsuccessful, the tension grows as they are strengthened and by consequence the pain. Our domination by these movements forces attention upon that which is directly connected with them, and this, together with contrast, makes the pain more intense. That the general action of pain is to increase the conflict that occasions it, is a view that works satisfactorily;

[1] Preyer, *Seele des Kindes*, p. 93.

the objection to it is that it seems to go beyond our knowledge in making pain arise always and everywhere from discord. But, if for this reason we cannot accept it without some reserve, we may modify it thus. We may say simply that the general action of pain is to set up disturbance about the seat of its origin, a disturbance which continues and heightens itself, until a result has been produced which removes its source. Pain on this view will not always cause tension and reaction; but it will cause local agitation, and continue that and widen it, until some change has brought relief. Upon neither view, so far, has pain a direct negative action; but if we choose to add that pain works directly towards lowering that which pains, so that change in the other direction has more chance of domination—that would be a tenable doctrine, but one I think quite uncalled for by facts. If, on the other hand, we can adopt the view that both the cause and the effect of pain is discord, that gives a unity to our doctrine, and is confirmed by the positive reaction of pleasure on its positive source.

And, so far as I know, all the facts would harmonise with this conclusion; while, on the contrary, that pleasure promotes and pain essentially checks action, seems quite contrary to experience. Pain checks action when its continuance produces exhaustion,—that is certain, and I do not doubt that its wearing effects are specific; while pleasures probably exhaust us not because pleasant but because intense. But the direct action of pain here is still to excite change, and its opposite influence through exhaustion is indirect and accidental. And it prevents motion again indirectly by suppressing those feelings which would otherwise produce it, and indirectly once more when by experience we have learnt that to move is to increase pain. But restlessness here takes other forms, or is diverted into some kind of restraining effort. Nor does fear paralyse because painful, but mainly because it otherwise prevents the feelings and ideas which are necessary for activity; and, when the dreaded evil turns to real pain, the creature struggles all too late. Restlessness, bodily and mental, is the chief effect of pain; the remainder comes accidentally. But as to the action both of pain and pleasure, we shall be clearer when we have got some light on Desire.

II.

Pleasure and pain are not desire, nor does either of them necessarily involve it, either originally or even at our stage of development. "If" (as Mr. Spencer recommends, *Psych.* i.

280) "we substitute for the word pleasure the equivalent phrase—a feeling which we seek to bring into consciousness and retain there, and if we substitute for the word pain the equivalent phrase—a feeling which we seek to get out of consciousness and to keep out,"[1] we are confusing consequence and condition, and are making a serious psychological mistake. If we take pleasures of repose and simple pleasures, as of smell, where no want has preceded, I at least am unable there to verify desire. And with pains the same conclusion, though less obvious, is not less certain. In dull constant pains, to assert that desire is always present would be surely a paradox. To be restless is not necessarily to *desire* a change. And if it is urged that pain means tension and tension desire, I reply that *psychical* tension is not always the cause, or even *always* the effect of pain; and that, if it were so, yet mere tension (as we shall see lower down) is not the same as desire. Nor, to pass to another error, is desire the idea of a pleasure or the pleasant in idea. For it is not true, in the first place, that you can have desire without tension; and, apart from that, in the second place, it is not true that pleasure in idea must be the object of desire. I intend here to treat these two errors as refuted,[2] and to pass to something which I at least find more interesting.

Desire is obviously a state of conflict and of tension, and there is a doubt whether this tension is not the whole of desire. If we have an idea of a state of ourselves, which is impeded by our actual condition, and which struggles against it to become a reality—can we call this desire?[3] On this view

[1] This erroneous doctrine is held far too widely. The further substitution of "desirable" as another "equivalent phrase" for pleasure has led to further errors on the part of J. S. Mill and Prof. Sidgwick.

[2] My justification is the fact that, so far as I am aware, no attempt has been made to deal with the objections which have been urged from various sides. In my *Ethical Studies*, 1876, if I may mention my own contribution, I discussed the question of desire, and in the main, I still think, satisfactorily. Volkmann, whose acquaintance I have made much later, must be referred to (*Lehrbuch*, § 143). The only thing like an argument that I have found since is in Waitz (*Lehrbuch*, p. 421), who, to the objection that an idea of the pleasant may exist and yet not be desire, replies by an attempt to deny the fact. He says that, if the idea is not desired, it also is not thought of, and does not appear, *as* pleasant (now). But this rests on an ambiguity. To appear *(erscheinen)* pleasant may mean simply to be felt as pleasant, or to be thought of as pleasant. The former is beside the question, and to the latter I reply by asking: How could I have a doubt or a denial as to pleasantness under present conditions unless I entertained the idea? But is that doubt or denial a desire?

[3] Drobisch, *Empirische Psychologie*, p. 222; cp. Volkmann, § 139. Waitz, p. 418, dissents.

pleasure and pain are accidental to desire, and the tension of the idea against fact is its real essence. Is this doctrine a true one? It will be seen lower down how far I can follow it in respect of volition, but as an account of desire I cannot assent to it, for I still believe that pain and pleasure belong to the essence. And it seems to me clear that we have thoughts, and thoughts of our own possible future, which try to come in and are impeded, and where yet desire is plainly absent. Among other states, one is led naturally to think of expectation. Now, if the tension of an idea against fact makes desire, then all expectation must be desire, and this is maintained.[1] But, as I observe the facts, one can anticipate one's own neutral future without any desire; and even a misfortune, when one is resigned and is fully prepared, may be awaited without either fear or hope. And, again further, we may expect what we know *we* shall not see, and, surely sometimes, may do this without any desire. 'No,' I shall be told, 'there is always uncertainty and unrest and a desire to have an end of it. We want the removal of the tension through the victory of something expected.' But, I reply, we must distinguish. All tension may set up desire, and, if prolonged, usually does so,—that is certainly true, while to say that it essentially *is* desire is not true, and it will repay us to dwell on this distinction. Why, in the first place, does expectation tend to pass into desire? We have an idea which tends to particularise itself (MIND xii. 360), and in the present case, not to complete itself ideally, but sensibly in presentation. What is presented on the other hand is now in some point discrepant, and hence a conflict which so far is neither desire nor expectation. It is so far not desire, because (to anticipate) the idea is not felt to be pleasant; and it is not expectation until the idea in its content has a reference to a subsequent and modified presentation.[2] Now, in expectation, the idea, *as* an idea, is not discrepant with the presented, but, as a mental state, it is so; and again, the time-relation (which makes expectation) has a tendency to drop out, and so to give rise to conflict. Further, disappointment may come in, and, while weakening expectation (proper), establish and aggravate the discrepancy. Hence, in all expectation may come a discord which produces pain, while, on the other hand, the idea is felt (and perhaps also expected) to relieve. At this point, when the idea is felt to be pleasant against an actual pain, desire has been created.

[1] Drobisch, p. 98; cp. here Wundt, ii. 334.

[2] We see here how incorrect it is to say desire implies expectation.

We may illustrate this by the case of an expected operation. It is first looked forward to with sinking dread, but, if it is deferred, so much mental unrest may be produced that we find our present state intolerable. Quite apart then from any hope of an ultimate benefit we desire anything that will free us from present anxiety. Fear may thus, through its own pains, be turned to aversion against itself, and on the same principle with greater ease a neutral expectation, through its tension, may be transformed into desire. For this reason the view that *mere* expectation already is desire cannot be accepted. Nor do I think the pleasure from gratified expectation would be an argument in its favour. That is caused naturally by the expansion which comes when the idea is particularised, and which also comes at times from an access of fresh sensations, where no idea has preceded, and no desire could have been felt. We must bear in mind further, with a view to avoid confusion, that there are many intellectual states which really do involve a strong desire for a result; but these states are not mere expectation, and pleasure belongs to their essence.

Our result so far is this. Desire is not mere pleasure or pain or the mere idea of pleasure, and it is again not the mere conflict of idea with presentation. We must add that want or craving or the pain of defect is not desire, unless these are taken to imply the idea of what is wanted. But from this mistake we may collect the positive truth that not only does a mere idea of pleasure fail to be desire, but, even when that idea is felt as pleasant, still desire may be absent because want is not there. Thus we may remember past delights and take joy in the remembrance, but feel no present wish to re-experience them because we are satisfied as we are. And unless an uneasiness precedes, or is developed, no desire arises. Thus for desire we must have three elements—an idea conflicting with reality, that idea felt to be pleasant, and the reality felt to be painful; and these elements[1] felt as one whole state make up desire (*Ethical Studies*, p. 239). Whether the whole is pleasant or painful depends upon circumstances (*ibid.* p. 259). The moving element

[1] I do not use 'feeling' as equivalent to pleasure and pain. I could not in a short space explain what I think the proper sense of the term. But the 'felt' answers roughly to the 'immediately given'; and, since this is one with its pleasure and pain, and, since these aspects are emphatically immediate and also prominent, they tend to usurp the word 'feeling'. This usurpation is, in my opinion, not justifiable, and, against the constant stress of language, can hardly be maintained consistently. Cp. Prof. Bain's remarks, MIND xii. 376-9.

in desire is two-fold—first the pain of want leads to change, and in the second place, apart from that, the idea tends to realise itself, mainly by Contiguity. The pleasure does not move except so far as it reinforces the idea, and adds, on the other side, to the pain by contrast. There are questions as to the *object* of desire to which I shall return; but I will first deal with some remaining difficulties as to pleasure and pain.

There are some points in what follows where I have to express my dissent from Prof. Bain's views. I do not intend to criticise his law of Self-conservation either in principle or in all its details. My position towards it as a whole may be readily gathered, and I will use this opportunity to remark how much the psychology of the Will has been indebted to Prof. Bain, and how much I feel that I have learned from him. But I cannot agree that pleasure tends in general to excite activity and pain to check it, and I will show how in some cases such a doctrine is incorrect. When on this view an animal approaches the fire, the pleasure of warmth excites the motion until the pain of heat checks it. But we have seen that, quite apart from pleasure or pain, an idea realises itself (through Contiguity mainly). The idea of approach, once suggested, tends to call up the associated ideas and feelings, and they again the physical movement—and this apart from pain or pleasure. Prof. Bain for other purposes has laid stress on this tendency of an idea to realise itself,[1] and I must direct attention to the same point here. If now we add the action of pleasure, as we understood it above, this idea of movement is supported and strengthened, just as it would be if it were *not* the idea connected with activity, but were another idea connected with repose. And I must go on to point out that the pleasures of repose have been somewhat strangely dealt with. If we take such an instance as rest in a warm bath, then upon our view we could truly say that the pleasure reacts to increase the special bodily functions, and again the sensations and ideas that are soothing our mind. But that would not satisfy Prof. Bain's doctrine, and, if I do not misunderstand him, he is driven into surprising paradoxes. He states first that pleasure produces the activity of maintaining a *rigid attitude*, and secondly that, as we are, we *must be* active because we *should be* so [under altered conditions], if disturbed.[2] But the necessity surely for such paradoxes is a refutation of the doctrine. And the same conclu-

[1] *Senses and Intellect*, p. 342; *Emotions and Will*, p. 390. Cp. the tendency of mental movement to persevere, *Senses, &c.*, p. 426.

[2] *Mental Science*, p. 324; cp. *Emotions, &c.*, p. 317.

sion is forced upon us by the inhibitory action of pain. We saw above how and why pain, apart from exhaustion, does check action by stimulating change. The stimulation, however, according to Prof. Bain, is wholly non-specific, and the pain simply lowers. But surely the necessity, which led to the conclusion that pain as pain does not cause movement, could have led far more easily to the same denial as to pleasure, or even to the assertion that pain, as pain, always heightens vitality and that its lowering action is not specific. And when, in particular, unpleasant taste is asserted *not* to set up facial movement the theory comes into rude collision with fact; as it does once more when it maintains that in satiety eating stops only when "we have run up to the bristling point of some pain".[1]

If we are willing to enter further into the detail of desire, we shall see the workings of pleasure and pain more clearly. Let us take the case where an animal moves, or attempts to move, nearer to a dying fire. Here the actual state is felt to be disagreeable either because simply felt as chilly, or because hostile to the idea of greater warmth, which has survived and strives to realise itself, and which also by contrast works on our actual feeling. Or again the idea of more warmth through approach may be suggested by association as a relief, or once more a chance movement may bring it in through sensation. Hence comes desire, and in this there are several moving elements. The pain of chilliness in this case moves to produce a change; next, the idea of warmth moves to realise itself; thirdly, that idea is felt to be pleasant and has its own action increased; lastly, by contrast, the original pain is also increased, and, if the original state had been neutral, would now be created. The whole result is the felt tension which we call desire, and we can see that the source of movement is not single, and cannot be set down to mere pain and still less to mere pleasure. It is true that relief from pain is an idea which is pleasant, though it assuredly is not always the idea of a pleasure. It must always be felt as pleasant, so far as it goes, and its pleasantness most certainly adds to its activity. Through such an idea of relief it is, that in pain we are able to keep ourselves from moving. The movement or attitude that lessens pain becomes a working idea which keeps down restlessness, and to a certain extent does work because it is pleasant. But we falsify this truth when we transform it to the paradox that the whole of the activity comes from the pleasure.

[1] *Emotions, &c.*, pp. 330, 316; contrast Preyer, pp. 74 ff.

The great importance of this question will perhaps justify further detail. Pain, it may be urged, must check action, because at least in some cases the pleasant activity could not otherwise cease. But this objection would forget that, as the pain of want goes, the pleasure loses its assistance; and that again, further, with physical change the positive conditions of pleasure may disappear. The mere tendency of the idea to realise itself survives, but in its weakened state this can be driven out by the ordinary competition of other ideas and sensations, and that without pain. And when further we are asked how, if pleasure does not move, a half-tasted satisfaction can intensify desire, it is not hard to make answer. In the tension of desire the idea of the movement is struggling and unsteady. Hence doubt may weaken desire and certainty may inflame it, not because desire implies expectation or belief or even clear consciousness, but because it does in some ways depend on the strength and steadiness of the idea. Now increase of pleasure does go to support the idea. And further in partial satisfaction the idea will probably be reinforced by sensations which have come in. And both of these influences again will cause excitement by expansion. Secondly, by the same influence, the pain of want will be increased and so the tension aggravated. And the natural result of the whole is that desire becomes more violent and moves more violently. We see the other side of this when the cup raised to the lips removes thirst before the drinking. That is not only because the pain of uncertainty is removed, but mainly also because the idea overpowers the reality. This is now viewed, not as thwarting the idea, but as itself passing into its process, and so the tension, and (possibly) the pleasure, disappears. Where ideas are weaker, as in the lower animals, this seems to happen much less. And where we are active it happens seldom, for there usually to the last there is something which resists, and the last obstacle is often most vigorously attacked. Thus a port in view makes the idea of wreck doubly painful, and adds to our striving unless the sight of danger disappears. What is called the effort of despair comes on the other hand mainly from the pain and the extraordinary excitement which its tension has generated; the pleasant idea of escape must of course be an element, but the whole state is clearly painful, and pain the chief mover.

Turning now from the inquiry: What *moves* in desire? let us once more inquire, What is the *object* desired? That the object is always pleasure we have seen is a mistake, and it

would be another mistake to introduce muscular activity into its essence. Indeed even in some sensuous desire, as for warmth, there may be no essential relation of the object to our muscles. Nor can I see any good reason to doubt that a creature might have desire even though it possessed no self-movement. But, passing by these prejudices, let us raise another question. What is desired seems to be always the realisation of our idea; and it has been argued that this reality must be a reality for us. But that, it is further urged, must be our state of mind. If so, what is desired will be a presentation to ourselves.[1] But this is clearly not the case. We may desire what we know it is impossible we should see, as the fortune of our descendants and a good use of our legacies. And to call this an illusion, and to argue that our desire is here really for certitude, or else for the impossible, would be to me a mere paradox. 'Oh! to know he is safe!' implies a wish for his safety, and we want the knowledge of that usually as something *per accidens*. Desire of course cannot be satisfied unless the idea is both realised and realised for me. But the idea, the *content of* the desired, as distinct from the psychical state of desire, need not include any kind of relation to me. That relation must exist in my actual satisfaction, and my desire can, therefore, in some cases, never be followed by satisfaction. But I fail to see how that shows that the object of my desire must be other than I think it, or why in general desire *must* imply a possible satisfaction. Again, I have of course a natural tendency to imagine myself there where I know that I cannot be. But this tendency is very far from always qualifying the object of desire.

I will now glance briefly at a point far too negligently handled. What is the nature of *aversion?* First the object of aversion, like the object of desire, is always an idea. We may indeed *seem* to desire the sensations that we have, but our object is really their continuance or their increase, and these are ideas. And so it is with aversion.[2] The mere incoming of the painful is not aversion, nor is even the fear of it, if fear is confined to mere contraction or again to aimless shrinking back. To me aversion seems positive, what we

[1] Drobisch, p. 220; Volkmann, ii. 397; Lipps, *Grundtatsachen, &c.*, p. 610.

[2] Mr. Sully, *Psych.*, 582, should not have spoken of "the assertion of Waitz that aversion involves a belief in the reality of the pain". What Waitz says is that its object must be thought probable and *expected*, a very different view. Even this, however, is contrary to fact. All that is true in it is, that, where we can, we suppress groundless fears because their nature is essentially painful, while that of our desires is not so.

call 'active dislike'. It implies a desire for negation, for avoidance or destruction. And hence its object, to speak strictly, cannot be reality, since it implies negation, and that is an idea. But desire for negation is still not aversion, until painfulness is added. The object to be negated must be felt to be painful and may also be so thought of. Aversion then is the desire for the negation of something painful. It is not a negative kind of desire over against a positive kind, and I myself could attach no meaning to a negative desire. Aversion is positive, but its true object is the negation of that which is commonly called its object—a confusion which has arisen from taking dislike to be mere negative liking. Aversion has a positive character, or it would not be desire; but its positive side is variable. There may be a definite position whose maintenance we want, as when we are averse to the injury of something we love; or again, the positive may be left blank—something, anything is what we want if it will serve to rid us of the painful. But again we may positively desire the act of destruction, with the agencies of its process, and so depend for the pleasures of life on our aversions. I hope this brief sketch may throw light on an obscure corner of our subject, and I will, in passing, advert to another mistake. Desire and aversion have been taken to be aspects of desire, since that is tension,[1] and (we may add) is to that extent painful. This is mere confusion, for all aversion has an ideal object. Now the (painful) tension of desire is not an object at all. It may be made one, and so may give rise to an aversion. But this will clearly *not* be an aspect of the original desire, but will be a new desire supervening. I may remark further that (as was the case with desire) the *object* of aversion (as distinct from the *state*) need not contain any sort of reference to the self. It is no illusion by which I am now averse to the ruin of my country after my death.

The subject of desire offers other interesting questions, but I must go on to *volition*, and will do so by the discussion of a necessary problem. How far is an *idea* required for desire? It may be truly objected that, if idea is to mean image, then, when desire is directed on an object of sense, there need be no image, distinct from that, present to the mind, and, if so, no idea. But my reply is that idea is no more equivalent to image than it is to sensation. With me the opposition here is not between external sensation and internal image, for both of these are mere psychical facts. The difference between them is doubtless psychologically important and

[1] Volkmann, § 140; Lipps, p. 604.

also interesting, and it would be a pleasure to me elsewhere to discuss its difficulties. But here it is irrelevant. Sensation and image are psychical facts of different kinds, still they are mere facts. Their content is not alienated from and indifferent to their existence. But an idea is in any part of the content of a fact so far as that works beyond its existence. It does not work apart from, but it works more or less independently of, its starting-place. It is of course a psychical event, but that side of it is accidental. It is what later becomes a *meaning*. And for this reason we may have an image without an idea, and again an idea without any image, since a sensation may supply us with a content used beyond the sensation. Now the result of the idea's working need not be separated from its basis, as when I see a man, and through association then see him as an Englishman, and do this without any image. Here what, we say, is 'called up' (and which is *not* an image) may be said to coalesce with, and be modified by, the starting-point.[1] But again the element brought in may be discrepant with the presentation, as when the sight of a fruit gives me feelings of taste, which cannot, while that is out of my mouth, be identified with it. The result here may be an image, a psychical fact known not to be in outward existence. But there is an intermediate state where the presented is qualified ideally so as to collide with itself, and where this discrepant content is desired without being a separate image. A common instance of this would be desire for (the continuance of) a feeling which exists. And it was when sensation had been overpowered by its idealised self, that desire, as we saw, almost ceased before the moment of possession. This again is how we can have a desire without knowledge, a dim desire with no clear object—as in the usual example of the sexual impulse. It is not that we have *no* idea, for, if so, our state would be something lower than desire. But the idea is a common element, a something in a number of psychical states, which pleases and is not in harmony with these states as they are, and its increase is felt to lead us beyond, we know not where. We desire the presented, but we desire it with an ideal qualification. We need have no image, and yet even here we want to realise an idea.

To take idea merely as existing psychical fact is everywhere to be driven into a dead-lock or a fiction. For instance, desire, we all know, may be for internal fact; we may want, *e.g.*, the

[1] This is only a mode of statement and is really incorrect. Since in the present case nothing comes into existence in separation from the starting-place, there can be no coalescence or modification proper.

existence of an idea. But, if so, we must have the idea of an idea. Upon this, James Mill, a man whose courage rose higher as facts grew more opposite, presents us with a dilemma. The idea is there *or* it is not there (*Analysis*, ii. 358). No, we reply, when we desire, it must be there *and* yet not there. We must have a psychical fact containing features out of harmony with its existence and pointing beyond. Suppose I desire to go through a proposition in Euclid. I have a psychical fact which contains both the general character of this process, sufficiently for recognition, and also the feature of the existence of the process as my psychical fact—and this is not in harmony with what I have. No doubt to say what the basis of an idea is may be very difficult indeed, and I am not discussing that (MIND ix. 289, xi. 313). What I must insist on is that, when we desire, we have already what we want in recognisable character; and, if an idea is an image, this leads to difficulties which, in my knowledge, have never been met. Suppose that we are trying to remember, for example, a name, what is there in our mind? This question was forced on his editors by James Mill, but the answer is unsatisfactory. "We have some collateral or something to determine our search for it," is Prof. Bain's answer (*Analysis*, ii. 358). If we had a mere collateral, I reply, that is not the idea of another collateral at all; nor again, if it were, should we desire this particular one, for the mere collateral would be satisfied by anything else which turned out to be collateral. And if Prof. Bain means more than this, will his theory account for it? "We will to remember the Greek name of the god, called by the Romans, Bacchus. We have in mind the name Bacchus, and the knowledge that the Greeks had a different name for the god" (*Analysis*, ii. 359). Yes, but the idea of a name qualified by the general feature of belonging to a god with a certain character—how is this going (apart from the grossest of fictions) to be translated into the existence of mere psychical images?[1]

The importance of this point in regard to Volition compels me to refer to another mistake. I cannot admit that mere completeness, and the filling out of detail, is the essential distinction of the real from the desired. It is usually a concomitant, but it may be absent. The main feature which is desired is existence within the context of the outer or inner world of presentation—and the detail

[1] And what is the image of "a blank in our present ideas?" J. S. Mill has tried (*Analysis*, i. 99) to answer the question: What is the idea of the absence of anything? and his failure is again instructive here.

certainly *need* not be greater on the whole, though there is commonly some new feature which is also compulsory. If I am looking for the solution of a complicated intrigue, when I first see this, it need not be richer than what I previously possessed, except in one feature, and on the whole it may be poorer. And suppose I long to see if my horse is at night in the field, I may have an image far more special than the dim form I can make out. But my desire is satisfied if the bare essentials are perceived within the context of the given outward space. Particularisation of an idea's content is in some cases what I desire, and its existence even in psychical fact is here to some extent accidental (MIND xi. 313). But this is far from being the case everywhere.

III.

From this point we may pass straight to the essence of Volition. It is will when an idea produces its existence. A feature in present existence, not in harmony with that and working apart from it, gives itself another existence in which it is realised and where it is both idea and fact. And will is not a faculty or a separate kind of phenomenon. It is merely one special result of general laws and conditions,[1] the main law of Individuation with its branches, Blending and Contiguity (Redintegration). If an idea works itself out ideally and subject to identity —the process is thought. If, on the other hand, it produces fact in which its character and existence are no longer discrepant, the process is will. And the other kinds of phenomena could be easily shown to arise from other workings of the same laws and elements. But here, confining myself to volition, I will first state broadly the main principle, then defend it against objections, and add at the end a modification. We shall see the essence most easily, if we begin with *internal* will. Now mere thought need not be will in any proper sense of that term. If I begin with an idea, and its logical consequences develop themselves in my mind, it is true that this process is a series of new facts, and we may say, if we please, that these events are produced by the activity of thinking. But still the process is not will, because the result is not the existence of the original idea, and, throughout the process, the side of fact is merely accidental. Suppose, *e.g.*, first, that my wandering thoughts come on one of Euclid's theorems and

[1] Both here and in what follows, I suppose the reader to be acquainted with my articles in MIND xi. 305, xii. 354.

that they are led to trace the argument; and suppose, secondly, that in addition I have at the beginning the idea of going through the argument,—the second of these cases is volition, while the first is not. For in the second we have a general idea of the proposition over against a psychical state with which at present it collides, and then we have in the result a process where the existence is the existence of, and proceeding from, this idea. But in the first case, there being no idea of the result, the result does not give to the idea existence. Or take the will to recollect: here I have first an idea of the thing wanted, but not its existence (what exists is discrepant with the content required); then the result gives me psychical fact containing my idea. But if, without being required, the thing, as we say, had come up, the result would still be a fact containing an idea, but this idea would not be one that has gone before and has gone on to produce its own existence, and therefore it would not be will. Thought must alter the phenomenal sequence, no doubt, but so also does mere emotion and again sensation. The question is whether this sequence has an ideal character, which, going before, has thus made its own existence in fact. And where this is not the case, the process is not will. Thought is not will except so far as there has been a will to think. But if we go on to ask *how* an idea can produce its own existence, the answer is—by Contiguity and also by Blending. By the first the end suggests the means, and by the second it reinforces whatever in psychical fact is already its own existence. I will not dwell upon this point, but pass on further to difficulties.

When we go on to volition where the end is not a thought but an outward event, there it may be said that our view comes to shipwreck at once. For there a bodily state is (or is implied in) the existence of the idea, and to make a bodily state we require a new agency. But I do not think so; I think we require merely the recognition that Association extends to the bodily side of mental states; and I assuredly could not call such an agency new, or anything but what I at least have always presupposed. I cannot even attempt here to lay down accurately the relation in which body and mind stand to each other, but shall assume that every psychical state has two aspects, and that these aspects once conjoined may redintegrate each the other. I am aware of the view that looks on mind as a bare effect, or at the most as a mere dependent concomitant. And I am aware of the view which denies wholly the interference of body with mind, or even goes on everywhere to make the 'cause' a mere occasion

upon which something else supervenes. And, considered as deductions from metaphysics, these views might be respectable—though the first of them (as we find it) comes usually from the coarsest and most ignorant dogmatism. But I decline to enter such an atmosphere. To demonstrate the influence either of body on mind or of mind on body is obviously impossible ; but there is evidence enough for each, and no more for one than for the other, and I am going to assume that this is so. But I do *not* suppose that bare mind ever works upon bare body. I assume that in a psychical state, which has both sides, the mental side may be the chief determining condition of a bodily result, and I cannot undertake here to define this further. Now, on this assumption, when we pass from internal to external volition, no new principle will come in. The one principle that we require is that Association in its working should not be limited to bare mind. And since it has been clearly understood that the laws of psychology do not pretend to be ultimate and absolute truths, I see no ground for hesitation. The law will be that, if a state of body A^1 and a state of mind B^1 have occurred together, any one state with the quality of A or B (call it A^2 or B^2) will tend to bring in the other. How this law is to be interpreted, if we press for final truth, I refuse here to discuss.

I will deal now with volition directed externally, and shall at first keep to cases not dependent upon the so-called 'voluntary' muscles. The reader must understand that I am saying nothing about the *origin* of the will,[1] but am aiming at its essence. And that its essence is not to be found, unless in connexion with these 'voluntary' muscles, seems to me a mere prejudice. An idea of a state of my salivary glands, or sexual organs, will produce its existence in fact. We hear of those who can blush, shiver, sweat or shed tears (Lotze, *Med. Psych.* p. 303), if their mind is set on it. And if we think of various sensations in parts of our bodies we can produce them at will, and can induce at our pleasure other bodily alterations through emotional excitement. Now on the one hand, I believe, the view could not be sustained that our striped or voluntary muscles are here the necessary agents ; and on the other hand to deny that these changes are volitional would be to confess oneself refuted. With the nature of the process, considered physiologically, I am not concerned ; but, as will, it is merely a case of our law. Where we have had a bodily

[1] On this difficult question see Sully, *Psych.*, pp. 593 ff.

state A^1 with a psychical state B^1, then, when B^2 comes in, A^2 tends to appear; and, if an idea of A is what produces the result, that result is volition. Blending too will supplement Contiguity; not that psychical and physical can be said to blend, but, where we have a local sensation of any kind whatever, there the idea of local change will assimilate itself with the sensation through their common basis, and, by strengthening that basis, will increase the bodily result. And, when we pass from these states to alterations produced through our voluntary muscles, the main principle is the same; and, abstracting as before from the question of origin, we can state it at once. Whenever any kind of mental state has been associated with a condition of our muscles, that state tends to reproduce that condition, and (as before) Blending may assist. Hence an idea of muscular movement, or of some end which implies it, will, given the proper associations, produce its own existence; and this without the invocation of any faculty such as Activity or Attention. With the physiological machinery I am not concerned, except to say that I should welcome with humble thankfulness any kind of finding from a jury of physiologists, if it confined itself to physiology.

This is the essence of volition, and, before I proceed to add a needful proviso, I will explain it further by considering some hostile doctrines. Prof. Bain, who perhaps has thrown more light on the Will than any other psychologist, would, I presume, reject the conclusion I have adopted. As to the connexion of the will with the 'voluntary' muscles Prof. Bain's doctrine is not clear to me, either on the side of body or of mind, and I will therefore not attempt to criticise it. And, where I feel that it is impossible for me to pass on in silence, my state is still one of a respectful inability to comprehend. What Prof. Bain seems to teach is that the will must be selfish, and that, for all that, disinterested actions exist. Such actions do exist, but, as I understand it, are not volitions, but proceed from the intellect. When a mother deliberately sacrifices her life, the good old fashion was to call this an illusion, by which the mother aimed at her own pleasure and hit something else. From this Prof. Bain dissents, and he holds the act to be unselfish. It is a disinterested action, but it is not will; on the contrary it is irrational, and comes from the intellect. And to the objection that the act is most palpably a volition, the reply, I suppose, is that, if this were the case, the will might be unselfish, which is not possible. But this strange confinement of volition to self-seeking action, so far from

appearing axiomatic, and a thing the opposite of which can call for no discussion, strikes my mind as in obvious conflict with fact. Indeed I should have ventured to consider it the plain refutation of any principle from which it comes. And, since I certainly cannot attribute this to Prof. Bain, and as certainly cannot find what else I should attribute, I must leave the matter as it stands with an expression of regret.

But, to pass on to another problem, it may be objected that desire is essential to volition, and that, unless the idea is felt pleasant, though it works, we have no will. This objection is defensible, and it was long before I ceased to consider it valid. But if we take acts from 'fixed ideas,' from mere suggestion, from imitation and obedience to the word of command—not to add hypnotic phenomena—I cannot see that desire is always present in volition. If an act is suggested, or ordered, and I do it, as we say, without thinking, it is a paradox to deny this in every case to be will; and the presence of desire is, by me at least, often not discoverable. Nay, on the contrary, the idea of the action may be painful.[1] We can indeed argue that, there being a general desire to act or an uneasiness during inaction, the idea of acting must be pleasant, or again that, by setting up a tension and then suggesting relief, the idea becomes pleasant. This is legitimate, but quite insufficient to prove desire in every case. In the first place a tension and a readiness to act certainly need not be present before the idea comes; nor, when it comes, need the idea first be felt to be pleasant before it can move; and, again, if the idea *makes* the tension and so becomes pleasant by suggested relief, then the idea is acting already apart from its pleasantness, and we are trying to explain the cause by its effect. Nor where tension is set up does the idea always become pleasant at all. Further it is not true that in all cases a tension exists. In a sudden act not only may we fail to be aware of it, but there seems to be no interval long enough for its origin. We can of course postulate that which we fail to observe, but why should we do so? Why should the idea working itself out *not* be a volition? If we deny this, we should stand on something better than a mere preconception as to the necessity in all cases of pleasure and pain.[2]

Let us go on to consider other possible objections. An

[1] I would remark here that, if we intend to make means and end essential to volition, we need to lay down that doctrine with more limitation than is usual.

[2] The attitude both of Mr. Sully and Mr. Ward is to me somewhat puzzling here. They seem to consider the question scarcely worth discussing; but I cannot understand why.

idea, we may be told, is not in all cases required, since the act may proceed direct from a perception. But I answer first that, if the perception is qualified ideally (as we explained on desire), and then produces the existence of that qualification, this is the working of an idea; and secondly, where this fails, the action is not will, and I think no one apart from theory would dream of so calling it. And with this reply we may pass on to more serious questions. It may be objected that our account is not too narrow but too wide. If an idea realising itself is will, then the result of expectation, being a realised idea, will come from volition. But not so, I reply, if the result is produced, *not* by the action of the idea, but by quite other agencies. If the idea is realised by something else, it does not realise itself. And this leads us to consider a point of importance. In the result of the idea, whether external or internal, there are always circumstances which fall outside the idea's content. Where these are usual and normal, they are held to come from the idea and themselves to have been willed. But where in the result elements appear which are not normally connected with the idea's realisation, and again where the normal result of the idea is interfered with from outside, we have not got will. There is of course very great uncertainty as to the detail of this principle ; and as to the features which, for this or that subject, are and are not normally connected with the idea, there is also confusion. But I am here simply concerned with the *psychological* principle. I will illustrate briefly. If I resolve to think out a problem, do I will everything which turns out to be required for its solution? And so again with the external. When I kill trying to cure, has the result been willed? We should say that any excess beyond what I believed normally connected with the idea is not my will at all. Suppose, on the other hand, I were thinking of a result, say the finding the amount of an unrighteous gain, and without any operation I got the answer required ; or say that I wished to steal a jewel and then found it in my hand. In these cases we should deny the existence of volition, because the normal working of the idea, however intense, could not have so brought out its reality. Part at least of that reality is referred, not to the idea, but to something else of some kind. And, though the limit and the detail are certainly vague, I think this principle is certain, and I will carry it on further. Suppose the memory of the disgusting causes us to vomit, suppose we blush because we think we may, or yawn, or itch, if the ideas of these are suggested,—are we to call this volition? I think the answer will confirm the principle we laid down.

If the connexion between the idea and the result is thought such that the idea was held with the expectation of its reality following, then, unless something happened abnormally, we should call that volition. Because I am able to yawn at pleasure, if I entertain the idea and so yawn, then I have willed it, unless I can show interfering conditions. But I cannot blush at will because the idea does not produce the reality, unless indeed by going round through emotion, upon which I, personally, cannot count. Hence my blushing is accidental in regard to the idea, though that idea really was a condition which acted.

But this of course leads us on into still greater difficulties. Take a case where the idea produces its reality, but where we say that the idea is forced on us and not resistible. We need not go to hypnotism for examples, for these, so far as I know, are only one kind among others of the action of ideas.[1] A morbid idea becomes dominant, and perhaps recurrent at intervals,[2] and produces an action. Is this volition? A painful suggestion, to which we are averse, by its mere strength and persistence carries us away. We fear to fail because fear unsteadies us; we fear to fail because of fear, and that anxiety produces the object of its aversion. This is not will, and yet the idea seems to make its own reality. Nor would it avail us to attempt to fall back upon desire and to make that the criterion; for, even where we desire, we do not call it will if the result seems abnormal, as when above I desired a conclusion without the operation. Desire shows will only if we desire what is under our control; and, if it is under our control, we should call it volition even if desire were absent. And in all these cases, I presume, our control is the criterion. If the idea is not controllable, we refer it to the outside and deny our own volition. If I could not help it, I did not will it.

But can we give a definite meaning to our inability to help? I am not asking as to our moral responsibility in general, nor as to the particular limits and detail of our control. I am asking simply for the principle on which we call, or refuse to call, our actions volition. We saw that will was an idea producing its own reality; but we saw also that the connexion may be merely apparent. The result may show an element forced out or thrust in by something abnormal, and which therefore we hold external to the process of the

[1] The idea that psychology is to be revolutionised by experiments in hypnotism could hardly have been entertained by any educated psychologist. But it is easy to startle the vulgar with the pathology of a science. To learn its principles is another thing.

[2] See Knop, *Paradoxie des Willens*, for examples.

idea. And since the idea does *not* here produce *its own* reality, these actions fall outside our definition of will. But we have to deal now with cases where the strength of the idea is said to prevent volition. We seem here to go upon the principle that an idea has a normal, absolute or relative, strength, and that anything beyond may therefore be referred to something external to our wills. And at first this degree of strength seems purely arbitrary; but it is, I think, not wholly so. A criterion seems to be found in the presence of an opposite idea. If I have an impulse and the idea of resistance is not present, the action is will, unless we save ourselves by the further (unexplained) assertion that resistance *would* have been present if the conditions had been normal. But, given the presence of a resisting idea, then I think we should disown the result of the impulse. For, if that impulse had been normal, we feel a counter-idea would have restrained it, and therefore its strength and its result may be looked on as foreign. And where the result is desired, the same tendency may still be noticed, and extreme force in the idea may be referred to the supernatural.[1] I think this aspect of self-control is one reason why the will has been (falsely) confined to the 'voluntary' muscles. The connexion of the idea with the result is there both far more direct and more regular, but this is not quite all. The opposing muscles give us a power of resistance and control, because they supply us with an idea which works wholly counter to the first. Apart from these muscles the simple definite counter-ideas fail, and control is more difficult. We cannot banish an idea by the mere general idea of its expulsion, and the special banishing element is often hard, or even impossible, to find.

Hence the conclusion I would urge is not that popular usage is quite consistent with our definition of will, but I would insist that, where it is not so, it is also quite inconsistent with itself. And, I think, through all its inconsistency it clings unconsciously to the principle that, where an idea realises its own content, we have the essence of volition.

I am compelled to add, before closing, a few words on the feeling of Activity. I may be told that this belongs to (if it does not constitute) the essence of will, and is at all events a criterion of the presence of volition. Now, if this meant that in all cases by applying that criterion we are delivered from doubt as to the presence of will, it is obviously

[1] I am keeping here to formal considerations. The material want of correspondence in the idea to our character would be of course another important reason for accounting it foreign.

false. For it is no easier to answer the question 'Was I active?' than the question 'Did I will?' But, dismissing this, let us ask if a feeling of activity is essential. On this I should like to say, first, that we may experience this feeling where will is not clearly present, and where the self-expansion does not seem to be produced by an idea of the result. In such cases the question arises how far an idea must always in some sense be presupposed; but I must pass this by. I will here (for the sake of argument) admit (what I do not hold) that with the feeling of activity we must have will, just as with will we have a felt activity; but the question will be as to the nature of their connexion. For me the feeling of activity will be merely a result, or at most a concomitant symptom. Wherever we have self-expansion attributed merely to self, there we feel ourselves active; and where an idea causes its own existence, there, normally, we have felt self-expansion. And it is not true that the presence or absence of this feeling is always the cause why we own or disown the idea. It is often true that the independent impression of foreignness is what makes this feeling fail. Normally any idea which realises itself expands my self as a consequence,[1] and, because mine, will produce the feeling of activity. And, where the idea is felt to be foreign through its material want of agreement with my self, there the contraction of the self and the failure of my activity is not a cause but a concomitant effect of the foreignness. Finally, where the working idea appears for other reasons external, or its

[1] That is, of course, expands it *so far*. If, *e.g.*, I will to narrow my psychical field, and succeed, that is still so far self-expansion, and since the idea is felt to be mine, I am aware of activity. I will repeat here, however uselessly, that in my opinion *mere* expansion of self can *not* give activity. Of course, therefore, some expansions of self may be passive; and indeed some are so. Of course, again, some may be painful. Of course, once more, even where the expansion is attributed to the self, the whole mixed result may be painful, though even here the element of successful activity is always pleasant. A difficulty may seem to arise when (unsuccessful) effort appears to give activity without expansion. But in such effort there will be unsteadiness and oscillation and the beginnings of that which, if it went further, would become complete success. This so far will be expansion, and without this, and if all were stationary, I am convinced that we should have no feeling of activity, nor indeed of effort. And I suppose that it may be my duty to state that I have made the distinction between activity of the soul "for the soul" and "for the outside observer" (MIND xii. 372), and have even expended italics to mark the fact that I have done so. On this whole question I fully admit that the view which I have adopted requires further working out. On the other hand I am as sure of its general truth, as I am convinced that no one will understand it who approaches it from a basis of hardened preconception.

results to be in any way due to outer interference, there the absence of the feeling of activity is caused by the independent perception, or again, partly and in some cases, is a joint effect with it. Throughout psychology we may feel sure that a consciousness of activity is a thing to be explained and not a thing to explain by. And with these hurried remarks I must bring this subject to an end.

But in conclusion I am forced to say something on the *normative* character of the will, and shall allow myself here on some points to travel outside psychology. Just as with thought we saw the law of movement become self-conscious and an end (MIND xii. 375), so it is with volition. The end of both is Individuality, self-realisation as the unity of harmony and expansion; but for will this end must seek existence in the series of events. My end is to realise this perfection in my psychical being, yet not in mine looked at by itself, but regarded as an element in a higher system. And, as with thought harmony and expansion fell under one head (*ibid.* 357, 381), so it is again with will. If positive self-realisation is the end and is essential, that end, given plurality, becomes negative of discord. It means an harmonious individuality, that, because it finds opposition, is forced to expand. This end is not quantitative in itself; but, since perfection can never be reached by us wholly, and yet is approached in various degrees, morality becomes approximative—though, if the end were attained, there would be no more quantity. And, since thus there is a scale of higher and lower, these aspects of harmony and expansion may diverge, and their seeming discrepancy may give rise to difficulties. For one life may be wider and another more harmonious. An end may bring greater loss to, or of, individual beings, while at the same time it seems to realise a higher system. Hence in a given case it may be hard to distinguish higher and lower. We have the same difficulty with knowledge. That may concentrate itself into a general view, or may scatter itself into details, and it is often hard to discover which movement best deserves the epithet of progress. We assume usually that differentiation, whether in science or in life, will not lead mainly to distraction, but will result sooner or later in a higher unity. But where this assumption is not well-founded (or at least seems hard to justify), a real difficulty arises.

If we turn now to pleasure and pain, and the relation they bear to the End and Standard, we may be asked if it is possible to justify their exclusion. But certainly they are not excluded. I do not suppose that facts exist, or ought to

exist, merely in order to realise a form, or generally for the sake of any abstraction. When we say that our end is to realise a principle, we mean that the reality of that principle is our end. But this again should mean the existence of fact having the character of our principle. It ought not to imply that the reality has another character, which is connected with the end merely *per accidens* and externally. This, it appears to me, is an assumption which would go beyond what we know. And thus, if pleasure is the feeling of positive self-affirmation, and pain again of discord, these feelings most obviously can not be excluded from the idea of realised Individuality. To say that without pleasure the end would still be the end, is to transcend our knowledge ; as it is even to assert that with a different sensible character the end would still be desirable. So far as I see, every one of its aspects goes (or may go) in reality to make the end what it is ; and I do not object to use the existence of pleasure and pain as means to know about its realisation.

But, if so, we must deal with the objection that the end has characters which may diverge. It seems as if, to progress towards a higher individuality, we might be forced to increase pain and to sacrifice pleasure. But I can not accept this possibility. We must bear in mind that, as we saw above with harmony and expansion, the sacrifice of one aspect may simply be relative, may be temporary and local. And, secondly, I feel sure that on some points we should reconsider common views as to progress. A one-sided distracted life, even if distraction proceeds from advance of the intellect, is not really higher than what, taken intellectually, may be beneath it, and may perhaps be destroyed by it in the struggle of life. And I think that the habit we have got into of believing the opposite has come partly from the assumption (rational or otherwise) that such a distraction is but relative, and must really be a means to some higher unity. And further, when measuring high and low by the test of self-dependence and individuality, we are too likely to fall into blind individualism. The psychical creature is not one thing actual by itself, nor is its spiritual relation to a higher individuality another thing that falls (I know not where) outside its being. Duped by such prejudices, we may set that down as poor which in truth is most rich. And I think that, if the reader will take these points into consideration, he may hesitate to say that development of individuality can bring greater pain. For myself, if that were shown to be possible, I should admit it as a difficulty which I was unable to solve.

Nor, further, will the implication of pleasure bring

quantity into the end. Perfection will imply pleasure, and the absence of pain; and we may add (I presume) that pain neutralised by pleasure, so as on the whole to lose its character, is not to count as pain. To make the end to be realised consist in increase of pleasure, or in an infinite sum or series, or in anything else which would exclude absolutely the possibility of its own reality,—may be left to those who are metaphysically incompetent. To hold that of two pure pleasures one can not be better than the other may seem at first sight paradoxical, but it is another side of the truth that a harmonious individual would be perfect and could not be more perfect. And, just as the end apart from pleasure becomes approximative, so, when pleasure is included, the end becomes neither more nor less approximative, to those who understand. My space does not allow a fuller explanation.

I will add merely that our conclusion has not led us to Hedonism. Hedonism I understand to abstract pleasure and pain from life, and to make of everything else a mere external means to the getting of one and the avoiding of the other. Hedonism holds, in short, that every other aspect of the world is absolutely worthless. Now I can say (speaking broadly) that what is not pleasant is worthless, but I can not add that it is worthless merely because it is not pleasant, and that the same thing (mere pleasure added) would, simply for that reason, once more be valuable. I dissent wholly from such a one-sided abstraction; and that the Universe, or our life, exists for the sake of one of its elements seems to me most indefensible. I at least know no rational way of arriving at the worthlessness of any single aspect of the world. This is the main point, and I must venture to doubt whether any one can agree with us here while still remaining a Hedonist in principle. Our Hedonism has however begun to purge itself of a mass of inherited errors. Its barbarous psychology of motive seems now quite optional. And its attachment to the reality of the mere individual and to the ultimate value of his private claims—a dogma neither based on nor assailable by reason—has begun to be challenged. How much Mr. Stephen has done for our Moral Philosophy by breaking away here from the highest authorities, has, I think, hardly yet been appreciated. He should have gone far towards making it possible for those who disagree to argue.[1]

[1] How far in what precedes I may have changed the position which I took up ten years ago, I have not thought it necessary to inquire. The divergence would be found, I think, on the whole to be inconsiderable. But I have not ventured to suppose this a question likely to interest.

II.—THE PSYCHOLOGICAL LABORATORY AT LEIPSIC.

By James McKeen Cattell, Ph.D.,
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University laboratories have the same ends as the University itself, the education of students and the advancement of knowledge. For both of these purposes psychological laboratories are urgently needed. The student of philosophy, subject to special temptation and danger, requires even more than others the training coming from natural science and the immediate contact with facts. The extent to which original research can be carried on and knowledge advanced in a psychological laboratory can best be tested by experience. It may be that the problems opened by experiment to the student of psychology are not less interesting or important than such as can be solved in chemical, physical or physiological laboratories.

Experimental psychology undertakes as its task the analysis and measurement of mental phenomena. It may be thought that the difficulty in psychology is the plethora rather than the lack of facts, but the facts with which psychology has mostly dealt are like the facts of the external world gained from everyday experience. In the face of a great mass of such facts astrology and alchemy were developed, and it was fancied that useless hypotheses explained phenomena such as the fall of heavy bodies, the rising of water in the pump, and the movements of the planets. It was only after exact methods of analysis and measurement had been introduced that astronomy and chemistry became possible, and apparently isolated facts were brought together under the law of gravitation. So long as the phenomena with which a science has to deal cannot be repeated for accurate study, there is but little hope of attaining exact knowledge. The progress of pathology, for example, has been slow, and it has only become a science since laboratories have been established and hospitals and medical journals have made it possible to study repetitions of the same symptoms. Again, the phenomena with which the Society for Psychical Research deals, in so far as they are inaccessible to experiment, are not apt to give accordant or scientific results. But whenever experiment has been introduced into

science, a rapid and almost sudden advance has followed, and there are good grounds for hope that methods which have been so fruitful in physics will not prove barren for psychology.

The relation in which experimental psychology stands to introspection has been much misunderstood, and this is not to be wondered at, seeing that certain physiologists seem almost to claim that psychology would be better off if there were no such thing as consciousness. Experiment is not meant to take the place of introspection, but is meant to make scientific introspection possible. The study of consciousness is, as we all know, fraught with peculiar difficulties: it is not easy to be at once the observer and observed; "the eye sees not itself," and the phenomena are both complex and transient. The best results have been obtained when introspection has been combined with the study of the objective manifestations of the contents of other minds, more especially when these have on the one hand become fossilised as in language, customs, art, &c., or on the other hand are relatively simple, as in children, in savages and in disease. But, under circumstances the most favourable to scientific observation, there are serious difficulties in the way of exact analysis and measurement, and it will be found that in psychology, as elsewhere in science, experiment gives the most trustworthy and accurate results. Experiment calls up the phenomena to be studied when wanted and, by keeping certain conditions constant and by altering others, gives the best chance for analysis; above all it enables us to *photograph* the transient phenomena and subject them to objective examination and measurement.

Professor Wundt, by the publication of his *Physiologische Psychologie* in 1874 and the establishment of a psychological laboratory at Leipsic in 1879, has made himself the representative of the effort to introduce experimental methods into psychology. Weber, Lotze, Fechner and Helmholtz, in Germany, and Bain, in England, had cleared the way, but their books and researches remained to a certain extent isolated attempts, until Wundt directed toward one centre the divergent lines, and persuaded men of science on the one and hand students of philosophy on the other to accept the new science.

Wundt was called from Zürich to Leipsic in 1876, and as soon as possible afterwards took measures toward the establishment of an university laboratory for psychological research. He was known as the author of important works on physiology and physics, as well as on psychology, and

this gave his recommendation the more weight. In 1879 rooms for the laboratory were set apart in the university buildings: the authorities also granted a yearly appropriation for the purchase of apparatus, and more recently a demonstrator with a salary has been appointed. The laboratory is at present established in four rooms, and two more are about to be added. The rooms are conveniently situated in what is known as the *Convict* building, looking out on quiet courts with both northern and southern exposure. The number of students has gradually increased: last semester there were nineteen carrying on original research and others attending demonstrations. The students come from all quarters (it should be added, except from England); there are nearly always Americans and Russians, and often Scandinavians, Czechs, Greeks and Frenchmen. The men work in groups; at least two are needed to carry on most psychological experiments, the one acting as subject, the other taking charge of the apparatus and registering the results. The students must, therefore, mutually help each other; one is responsible for the research, and if it is successful he prints it, often using it for a doctor's dissertation. Wundt himself visits the laboratory every day, and is glad to answer questions and give help; he, however, tries to encourage the men to think for themselves, and to be responsible for their own experiments. He suggests subjects for research at the beginning of the semester, but he lets the students choose the direction in which they prefer to work, and encourages them to find independently problems and the methods of solving them.

It is interesting to note that the example set by Wundt at Leipsic is being followed in other universities. Psychological laboratories have been established or are being planned at Berlin, Bonn and Göttingen; in America, at Johns Hopkins, Harvard, Pennsylvania and Princeton; in England, at Cambridge; also at Copenhagen and elsewhere.

Wundt established not only the laboratory, but also a journal or "Archiv," the *Philosophische Studien*, for the publication of the methods and results of psychological research, and for the scientific discussion of questions in psychology, logic and theory of knowledge. This serial, published by Engelmann at Leipsic, appears whenever material making up about 150 pages has been collected. Since 1882 fifteen such parts have been issued; the table of contents of each number, as it appears, being given in MIND.

I shall now try to give a systematic account of the researches which have been completed or are now being

carried on in the Leipsic laboratory. The limits of a single article confine my notice to the briefest summary; I can, however, refer the reader who is interested in any special line of research to the detailed accounts in the *Philosophische Studien*. It may also be worth while to call attention to Ladd's *Physiological Psychology*, noticed in the last number of MIND, and to the fact that Wundt is about to publish a new and rewritten edition of his *Physiologische Psychologie*. We can classify the work done at Leipsic under four heads: (1) The Analysis and Measurement of Sensation; (2) The Duration of Mental Processes; (3) The Time-sense; (4) Attention, Memory and the Association of Ideas. Such a classification is, of course, merely a matter of convenience. Experiments made in different directions throw light one upon another and at their boundaries overlap, so that many of the researches put under one heading reach beyond its limits and into others. All science is, indeed, an organism no member of which can be thought of apart from the rest. As Aristotle has said, a hand cut off from the rest of the body is not even a hand.

1. *The Analysis and Measurement of Sensation.*

In physics force is usually measured by its effects, and in psychology we may some day be able to measure sensation by determining the movement accompanying a given sensation. But the cause is no less constant than the effect, and we may with scientific accuracy specify and measure a sensation by the physical stimulus causing the corresponding cerebral commotion. The relation subsisting between the sensation and the physical stimulus has, therefore, been the subject of much experiment and discussion. An especially large share of attention has been given to studying the way in which the intensity of the sensation varies with the intensity of the corresponding stimulus. It is impossible to give much account of this here; the reader must be referred to the books by Fechner, Müller, Delboeuf and others, and to the many papers which have been published in the *Philosophische Studien*[1] and elsewhere.

[1] Papers in the *Philosophische Studien* giving a description of research will be noticed below (being cited by vol. and pp. only). The following are those concerned only with theoretical discussion:

W. Wundt, "Ueber die Methode der Minimaländerung," i. 556-572.

W. Wundt, "Ueber das Weber'sche Gesetz," ii. 1-36.

G. Th. Fechner, "In Sachen des Zeitsinnes und der Methode der richtigen und falschen Fälle, gegen Estel und Lorenz," iii. 1-37.

Alfred Köhler, "Ueber die hauptsächlichsten Versuche einer mathe-

Weber first called attention to the fact that, when weights are laid on the supported hand, each must be increased by about $\frac{1}{3}$ of its original weight before any change is noticed. Since then many experiments have been made on the several senses, and it has been found approximately to hold that the least noticeable change in the intensity of a sensation is occasioned by a change in the stimulus directly proportional to the amount of the stimulus. Thus if there are 100 candles in a room we can just notice the change in the illumination caused by taking away or adding one candle; if there are 1000 candles, 10 must be taken away or added before a change is noticed. This relation holds most nearly for moderate intensities of the stimulus, and for the more mechanical senses, as sound. Weber's generalisation admits of several interpretations. It has been looked upon as a purely physiological fact, it being argued[1] that the sensation must increase more slowly than the stimulus, owing to the inertia of the sense-organ and more especially to irradiation in the brain. The view supported by Fechner is that we have to do with a psychophysical fact, which expresses an ultimate relation between physiological and mental change. Wundt points out that it may be given a psychological interpretation, and referred to the apperception of the sensation, thus being brought under "the law of relativity".

Weber's generalisation is of considerable interest both to physiologists and psychologists; inferences have, however, been drawn from it which I do not consider justifiable. The generalisation may be expressed in the equation

$$a = c\frac{\Delta S}{S}$$

in which c is a constant, S the stimulus, ΔS the change in the stimulus which can just be noticed, and a the least noticeable change in sensation. This equation, however, need only be true if a different value be given to a for every value of S, and only holds approximately and for certain values of S. It evidently is not true when S is very small, for then there is no sensation whatever. Fechner in order to get his equation

$$E = c \log S$$

in which E is the sensation and S the stimulus, the sensation

matischen Formulirung des psychophysischen Gesetzes von Weber," iii. 572-642.

G. Th. Fechner, "Ueber die psychischen Massprincipien und das Weber'sche Gesetz," iv. 161-230.

[1] See J. Ward, MIND i. 452.

being thus measured in terms of the stimulus, must assume the least noticeable change in sensation to be an equal increase or decrease in the intensity of sensation, and must, further, introduce in a questionable way the "fact of the threshold".

We have, however, more especially to do with the experiments made in the Leipsic laboratory. Sound and light have been used to investigate the relation between stimulus and sensation. The loudness of sound has not been satisfactorily measured objectively; so it was found necessary at Leipsic to set up some standard of sound before its intensity could be brought into relation to the sensation. Tischer[1] was the first to attempt to make such determinations; he found that the noise made by a falling ball was not proportional to the weight of the ball multiplied by the height from which it falls, but increases more slowly. Later experiments made by Starke[2] and by Merkel[3] seem, however, to show that

$$i = cwh.$$

in which i is the intensity of the sound, w and h respectively the weight of the ball and the height from which it falls, and c a constant depending on the material of the ball and sounding-board. The results of Starke's experiments, especially, correspond more exactly with the law than could have been foreseen, as there were several sources of variation; c, for example, was not always the same. The balls were at first lead and polyhedrons, and afterwards steel and ellipsoids, and the different points in the sounding-board had different elasticities, &c. The experiments by Tischer,[4] Lorenz,[5] Starke,[6] and Merkel,[7] all show the validity of Weber's generalisation, and give more exact results for sound than have been obtained in connexion with the other senses. Whatever the loudness of a sound may be, it must be increased by about $\frac{1}{3}$ before a difference is noticed. It should, however, be stated that the value of Lorenz's research has, not without cause, been questioned by Fechner,[8] and that experiments made by Merkel in another direction[9] do not seem to

[1] E. Tischer, "Bemerkungen über die Messung von Schallstärken mit Rücksicht auf psychophychische Versuche," i. 543-555.

[2] P. Starke, "Die Messung von Schallstärken," iii. 254-304.

[3] J. Merkel, "Das psychophysische Grundgesetz in Bezug auf Schallstärken," iv. 117-160, 251-291.

[4] *Op. cit.*

[5] G. Lorenz, "Die Methode der richtigen und falschen Fälle in ihrer Anwendung auf Schallempfindungen," ii. 394-474, 655-657.

[6] *Op. cit.* [7] *Op. cit.* [8] *Op. cit.* [9] See Cattell, MIND xi. 229.

be trustworthy. Researches on the loudness of sound are still being carried on at Leipsic; so we may hope for further light on the subject.

Ever since Helmholtz published, in 1862, his classical researches on sound, much attention has been given to the preception of musical notes, investigations having been undertaken by Mach, Preyer, Hensen, Stumpf and others. Careful experiments, not yet published, have also been carried on for several years past in the Leipsic laboratory. Luft with tuning-forks and Lorenz with an apparatus on the principle of the harmonium have been investigating the least noticeable difference in pitch in the same manner as the loudness of sound has been studied. We have seen that the ear does not readily distinguish differences in loudness; in pitch, on the contrary, small changes can be noticed with marvellous accuracy, and this whether the observer be 'musical' or not. In the range most easily covered by the human voice (from about c' to c''', 256 to 1024 vibrations per second) successive notes can be distinguished when the difference between the physical stimuli is $\frac{1}{4}$ to $\frac{1}{5}$ of a vibration per sec. Where the pianoforte machine gives 24 notes the ear can distinguish over 3000. Outside the limits of the human voice the least noticeable difference in the stimulus becomes a smaller fraction of a vibration as the note is taken lower, but not in direct proportion to the rate of vibration; so Weber's law in no case holds for pitch. Experiments are being now carried on at Leipsic to determine the accuracy with which the ear can distinguish musical intervals, the notes being given in succession.

Light-sensations have been investigated at Leipsic by Kraepelin,[1] who found that with moderate intensities a difference in the illumination of $\frac{1}{120}$ could be noticed, and that the difference must be increased to $\frac{1}{100}$ when the light was taken very faint. It is natural that the fraction should become larger as we approach the threshold of sensation, owing to the chemical process supposed to take place in the retina, and to the eye's "own light". Lehmann[2] and Neiglick[3] applied to light the so-called "method of mean graduation," a method of considerable interest to the psychologist. The observer tries to give the shade of gray

[1] E. Kraepelin, "Zur Frage der Gültigkeit des Weber'schen Gesetzes bei Lichtempfindungen," ii. 306-326, 651-654.

[2] A. Lehmann, "Ueber die Anwendung der Methode der mittlern Abstufungen auf den Lichtsinn," iii. 497-533.

[3] H. Neiglick, "Zur Psychophysik des Lichtsinns," iv. 28-111; cp. W. Wundt, "Bemerkungen zu vorstehendem Aufsatze," *ib.* 112-116.

which seems to him equidistant from a lighter and a darker shade, or from white and black. If it were possible to find a sensation y as much weaker than x as it is stronger than z we could take a unit of measure and speak of one sensation as three times as strong as another, &c. The application might, further, be extended beyond the intensity of sensation, so that, for example, the hedonistic calculus could really be put in practice, and it would not be absurd to calculate, as Plato does, that a just king lives 729 times as happily as a tyrant. The fact, however, is that we are not dealing directly with sensation but with our estimates, and even these seem to me, to a certain extent, conventional. I can say that a very dark gray seems to me more like black than like white, but when I come to pick out a shade which seems equidistant from the two, I am in doubt within rather large limits, and only come to any decision by thinking of the number of differences of shade I could distinguish in each direction. If this view be correct the method is reduced to a less accurate version of that of the "least observable difference". Neiglick found that his estimate remained constant, and that other observers, varying considerably at first, finally agreed with him. He naively concludes that some persons naturally judge differences in light with accuracy, others only after practice. The fact probably is, that Neiglick, knowing the objective measure of the light, was unconsciously aided by association, and, perhaps, to an extent which invalidates his results. The other observers, comparing their results with his after the series had been completed, naturally tended next time to approximate to his judgment. It is difficult to decide that one shade of gray is equidistant from two others, but after the decision has once been made it seems quite evident, and the point is easily held in mind. Lehmann's results were disturbed by contrast, and he was led to study its influence. He found that, whatever the illuminations of two contrasted surfaces might be, the contrast was the greatest when there was a constant ratio (1 : 4·76) between them. Neiglick found Weber's law to hold the more accurately the more nearly the contrast between the compared surfaces was a maximum. Schmerler[1] had previously made careful experiments, determining quantitatively the saturation of a colour the most favourable to contrast. The fact which however, was already known, that contrast is not the greatest when there

[1] B. Schmerler, "Untersuchungen über den Farbencontrast vermittelst rotirender Scheiben," i. 379-416.

is the greatest illumination of the surface or saturation of the colour is interesting, and not readily explained by either of the current theories of light-sensation.

Before leaving this subject a second paper by Lehmann[1] must be noticed, in which he advocates the revolving wheel with black and white sectors for photometric purposes, and a paper by Fischer[2] on the interesting phenomena of the stroboscope or 'wheel of life'.

2. *The Duration of Mental Processes.*

The department of research which we have just been considering, that concerned with the relation between the psychical state and the physical stimulus, has been aptly called *psychophysics*, and it might be well to limit the term to this subject, and not use it as synonymous with physiological and experimental psychology. The term *psychometry* can, in like manner, be confined to the subject which we are about to take up, the measurement of the duration of mental processes. Psychometry has received abundant attention from astronomers, physicists, physiologists and psychologists; nearly half the researches undertaken in the Leipsic laboratory are concerned with this subject. We are naturally glad to find it possible to apply methods of measurement directly to consciousness; there is no doubt but that mental processes take up time, and that this time can be determined. The measurements thus obtained are not psychophysical, as those which we have been recently considering, but purely psychological. It may be true that we are in some sort measuring the 'outside' of the mind, but the facts obtained, when we learn how long it takes to perceive, to will, to remember, &c., are in themselves of the same interest to the psychologist, as the distances of the stars to the astronomer or atomic weights to the chemist. But, besides the general interest of psychometrical facts as a part of a complete description of the mind, these times are of further and great use to the psychologist, as they help him in analysing complex mental phenomena, and in studying the nature of attention, volition, &c. It should also be noticed that psychometrical experiment has brought, perhaps, the strongest testimony we have to the complete parallelism of physical and mental phenomena; there is scarcely any doubt but

[1] A. Lehmann, "Ueber Photometrie mittelst rotirender Scheiben," iv. 231-240.

[2] O. Fischer, "Psychologische Analyse der stroboskopischen Erscheinungen," iii. 128-156.

that our determinations measure at once the rate of change in the brain and of change in consciousness.

While the importance of psychometrical research for the special student of mind would be admitted, it seems to me that its general interest has been overlooked. Time, like size, is relative. If all things should suddenly move more slowly or more quickly than at present, there would be no change for us. If, however, our physiological movements and mental processes should take place at the same rate as now, while our objective measures of time should move twice as fast, the days of our years would become seven score years, instead of three score years and ten, but we should not for this reason live any the longer or be any the older. If, on the other hand, we should live as many years as at present, but the rate of our physiological and mental motions be doubled, we should live twice as long and become twice as old as now. It would, consequently, be of immense theoretical and, perhaps, practical importance to learn whether in the course of evolution the molecular arrangement of the nervous system becomes more delicately balanced, so that the physical changes corresponding to our thinking pass more quickly—whether as thoughts become broader, feelings more intense and will stronger, the time they take up becomes less. It is thus an interesting branch of research to determine the time required for the simpler and more complex mental processes, and to study the variation in persons of different race, sex, age, education, occupation, &c.

It will not be necessary to describe at length the psychometrical researches undertaken at Leipsic, as the most recent of these have been printed in MIND.[1] Most of the earlier work[2] on this subject was then reviewed; attention should, however, be called to researches by Kraepelin and by Berger. Kraepelin[3] studied the effects of certain drugs on the duration of a reaction and of simple mental processes. These

[1] J. McK. Cattell, "The Time taken up by Cerebral Operations," MIND xi. 220-242, 376-392, 524-538; cp. xi. 63-5.

[2] M. Friedrich, "Ueber die Apperceptionsdauer bei einfachen und zusammengesetzten Vorstellungen," i. 39-77, ii. 66-72.

M. Trautscholdt, "Experimentelle Untersuchungen über die Association der Vorstellungen," i. 213-250.

E. Tischer, "Ueber die Unterscheidung von Schallstärken," i. 495-542.

W. Moldenhauer, "Ueber die einfache Reactionsdauer einer Geruchsempfindung," i. 606-614.

J. Merkel, "Die zeitlichen Verhältnisse der Willensthätigkeit," ii. 73-127.

[3] E. Kraepelin, "Ueber die Einwirkung einiger medicamentöser Stoffe auf die Dauer einfacher psychischer Vorgänge," i. 417-462, 573-605.

times seem to be at first lengthened and then shortened by ether and chloroform, and at first shortened and then lengthened by alcohol, a difference of action which, perhaps, has less to do with different effects of the drugs on the nervous system than with the method of taking them, ether and chloroform being inhaled and alcohol drunk. Berger,[1] in experimenting with light, sound and electric shock, found the reaction-time to become shorter as the stimulus was taken stronger. According to these experiments, the reaction-time for the several colours is the same.

It yet remains to notice some unpublished experiments made by L. Lange. He finds that the reaction-time is nearly twice as long when the attention is concentrated on the sense-organ as when it is concentrated on the hand. Wundt looks on these results as important, holding the "muscular" reaction to be reflex, while the "sensorial" includes apperception and volition. I have pointed out[2] that the reaction is at first voluntary, but that with practice the process becomes reflex and the time shorter. We must wait for the publication of Lange's results, and, perhaps, for new experiments, before we know whether an unpractised observer could immediately make his reaction reflex and quicker by concentrating his attention on the movement to be made, or whether the reaction-time of a practised observer would become voluntary and lengthened if he concentrated his attention on the sense-organ.

3. *The Time-Sense.*

Under this head I shall notice experiments concerned with the time-relations of perceptions and our power of estimating intervals of time. Together with this subject corresponding researches on space might be grouped, but experiments on local signs, sensation-areas, binocular vision, massiveness of sensations, &c., have not as yet been undertaken at Leipsic.

Stimuli must be separated by a certain interval of time in order that they may be recognised as distinct. This is doubtless in many cases a physiological fact due to inertia in the sense-organ. Thus in sight a chemical process is supposed to take place, and this does not reach its maximum until the stimulus has worked some little time, $\frac{1}{10}$ sec. per-

[1] G. O. Berger, "Ueber den Einfluss der Reizstärke auf die Dauer einfacher psychischer Vorgänge mit besonderer Rücksicht auf Lichtreize," iii. 38-93; also Cattell, *Brain*, vol. viii.

[2] Mind xi. 232.

haps, and continues after the stimulus has ceased. Light-stimuli following each other at intervals shorter than $\frac{1}{10}$ sec. are fused together into one sensation. In the case of sound and of touch the transference from external motion into a nervous impulse seems to be of a more mechanical nature than in the case of sight, and stimuli separated by a shorter interval may be given in consciousness as distinct sensations. The problem becomes more truly psychological when different senses are affected. Exner[1] found that the interval between such stimuli must be $\frac{1}{20}$ to $\frac{1}{6}$ sec. before the correct order could be given. Wundt,[2] and afterwards v. Tchisch,[3] experimented with an apparatus made so that a pointer passed a scale and when it reached a given division a sound, touch, or electric shock was produced. The problem was to decide what division of the scale the pointer seemed to have reached when the sound was heard or the touch felt. In this experiment there was usually what Wundt calls a "negative displacement," the added stimulus being associated with a position of the pointer earlier than that at which it had in reality been produced. The experiment was varied by altering the rate at which the pointer moved, and by making the added stimulus a complex affecting different senses. The results are perhaps explained by, and in return throw light on, the nature of attention.

Mach[4] and Vierordt[5] first undertook to determine how accurately intervals of time can be compared. This work has been continued in the Leipsic laboratory by four elaborate researches, which, however, do not seem to have given final or satisfactory results. The first three of these[6] need not detain us; we must, however, notice a recent paper by Glass.[7] He finds that times shorter than 2 sec. are overestimated, and those longer than 4 sec. underestimated. He concludes, further, that multiples of $1\frac{1}{4}$ sec. are estimated more correctly than other times, and that the "psycho-

[1] *Pflüger's Archiv*, xi.

[2] *Physiologische Psychologie*, 2te Auflage, ii. 264 ff.

[3] W. v. Tchisch, "Ueber die Zeitverhältnisse der Apperception einfacher und zusammengesetzter Vorstellungen, untersucht mit Hülfe der Complicationsmethode," ii. 603-634.

[4] *Sitzungsberichte der Wiener Akad.*, 1865.

[5] *Der Zeitsinn*, Tübingen, 1868.

[6] J. Kollert, "Untersuchungen über den Zeitsinn," i. 78-79.
V. Estel, "Neue Versuche über den Zeitsinn," ii. 37-65, 475-482.
M. Mehner, "Zur Lehre vom Zeitsinn," ii. 546-602.

[7] R. Glass, "Kritisches und Experimentelles über den Zeitsinn," iv. 423-456.

physical law" holds for the time-sense. Glass's experiments have been carried out with the greatest care, but the fact that four researches on the same subject have all given discordant results, leads us to suppose that something must be wrong in the methods used. Such an error in method is not hard to find. When the experimenter knows that a certain estimate will correspond with the law he has set up, he as a matter of course, though quite unconsciously, makes such estimate. Thus Glass made all his experiments on himself, and the same interval was estimated 100 times in succession. He gives his results in three series; the first of these does not correspond at all with "the law," the second approximates to it, but with considerable irregularity; in the third series he took the intervals where he expected to find his relative maxima and minima, and found them most accurately. The experiments by Stevens [1] on the time-sense, contributed to MIND, seem more satisfactory than those from Leipsic.

4. *Attention, Memory and the Association of Ideas.*

In the course of the experiments which we have been considering we have advanced from the outworks toward the citadel of the mind. We first examined sensation and its relation to the physical and physiological processes which accompany it. While the sensation is a fact of mind in no wise resembling the matter in motion with which it is associated, physical and mental processes have one important characteristic in common, an order in time. We found that the time taken up by mental processes can be measured in much the same way as physical change. We next considered experiments such as are meant to throw light on our space- and time-sense. We now, in considering attention, memory and the association of ideas, find ourselves at the centre of the mind, and in so far as such subjects are open to experiment, the results are of special interest to the psychologist. As has already been pointed out, our classification of experimental research is a matter of convenience and to some extent artificial. Many of the experiments already noticed concern matters now to be considered; for example, the "least perceptible difference" is a fact of attention, and the reproduction of time-intervals a fact of memory.

There seems to be an upper and a lower limit to consciousness or attention. On the one hand we cannot attend to a presentation of more than a certain degree of complexity; on

[1] L. T. Stevens, "On the Time-Sense," MIND xi. 393-404.

the other it must have a certain intensity and interest in order that we may be conscious of it at all. The upper limits of consciousness have been studied by Dietze and by myself. Dietze[1] used successive sound-impressions and found that when 16 beats of a metronome followed each other at intervals of ·2 to ·3 sec. the number could be correctly estimated. If the interval be taken longer or shorter than this, not so many can be grasped. If the beats are combined into groups as many as 40 can be at one time in consciousness. Even when 16 were used it is likely that they were combined into a rhythm with one accented and one unaccented beat. If this can be assumed, the results would agree with the limits of the rhythm used in music and poetry. It must, however, be difficult to be sure that the beats are not otherwise combined and perhaps unconsciously counted. With these results the experiments by Hall and Jastrow, contributed to MIND,[2] should be compared. I myself[3] determined the number of simple visual impressions, or complexity of an impression, which can be simultaneously attended to. On the average five simple impressions, such as lines or letters, can be at one time apperceived. When the impressions are combined into familiar complexes, as letters into words and sentences, many more can be grasped. The extent of consciousness varies considerably with the individual. I also determined the minimum sensation by letting colours and other objects work on the retina for a very short time. The time was found to vary for the several colours, as also with different words, letters, &c. It was thus found possible to determine the relative legibility of the letters of the alphabet. In this case we are left in doubt as to how far the inertia is in the eye and how far in consciousness. Experiments by N. Lange,[4] however, seem to be concerned wholly with a fact of attention. Helmholtz experimenting with light and Urbantschitsch with sound had noticed that a faint stimulus is sometimes perceived, sometimes not. Thus the ticking of a watch is heard, then disappears, then is heard again, &c. Lange found the intervals between the

[1] G. Dietze, "Untersuchungen über den Umfang des Bewusstseins bei regelmässig aufeinander folgenden Schalleindrücken," ii. 362-394.

[2] G. S. Hall and J. Jastrow, "Studies of Rhythm," MIND xi. 55-62.

[3] J. McK. Cattell, "Ueber die Trägheit der Netzhaut und des Sehcentrums," iii. 94-127.

[4] N. Lange, "Beiträge zur Theorie der sinnlichen Aufmerksamkeit und der activen Apperception," iv. 390-422.

maxima of intensity in sensation to be constant, and that a similar alteration in distinctness takes place in the case of images. This interval, two to three seconds, does not seem due to fatigue in the sense-organ or nerve, but apparently represents a natural rhythm in consciousness or attention. Wolfe[1] found a like rhythm in the accuracy with which musical notes can be remembered. Apart from this rhythm the accuracy of memory seems, in a general way, to vary inversely as the square of the time. A similar result had been reached by Ebbinghaus experimenting with more complex impressions.[2]

Experiments on the association of ideas have been made at Leipsic by Trautscholdt[3] and by myself.[4] The former determined the time it takes for one idea to suggest another, and also in 400 cases the qualitative results, classifying them in accordance with the nature of the association.

Thus have been briefly noticed the results obtained by research in the Leipsic laboratory during the past seven years. They prove conclusively that it is possible to apply experimental methods to the study of mind. The positive results are, besides, not insignificant, and will compare favourably with what has been accomplished during the same period in many chemical, physical and physiological laboratories. An increased interest is everywhere being taken in experimental psychology, and we may hope that we shall some day have as accurate and complete knowledge of mind as of the physical world.

[1] H. K. Wolfe, "Untersuchungen über das Tongedächtniss," iii. 534-571.

[2] See MIND, x. 454. The formulæ given by Wolfe and Ebbinghaus respectively are:—

$$r = \frac{kf}{\log t} + cf \text{ and } b = \frac{100k}{(\log t)^c + k.}$$

[3] M. Trautscholdt, "Experimentelle Untersuchungen über die Association der Vorstellungen," i. 213-250.

[4] J. McK. Cattell, "Experiments on the Association of Ideas," MIND xii. 68-74.

III.—INDIVIDUALISM AND STATE-ACTION.

By Thomas Whittaker.

One of the most prominent facts of contemporary politics, both theoretical and practical, is the movement away from what is called "Individualism". Philosophical writers of the most various schools, tracing their idea back to Comte or Hegel or Aristotle, or developing it independently as a psychological doctrine, insist that "society is prior to man"; that the individual man cannot be understood except as a social product, each man having in his mind the organised results of institutions, of law and of the experience embodied in language. Society is not to be thought of as something artificially formed by men for the purpose of doing some particular thing, but as the presupposition of all properly human activities. On the practical side, no fact is more familiar than the growing approval of the action of the State in matters that till lately the best reasoned political theory excluded from its competence. Yet there are, at the same time, influential thinkers who regard this whole movement, on its practical side, as reactionary. The principle of individual liberty, they insist, must remain for ever the only sound basis of political action; and to add to the functions of the governing power is to diminish the freedom of the individual.

Those who advocate new activities of the State, when they are not content with empirical arguments to prove that good will result in particular cases, usually fall back on one of the philosophic theories opposed to individualism. If it is urged that the action of the State interferes with individual liberty, they reply that "the older individualism" is superseded; that it is once more a part of sound political theory that "the State may do anything". The individualistic ideals of the immediate past are the outcome of philosophical individualism. The outcome of the newer doctrine is a more authoritative ideal.

In all arguments of this form there is an evident assumption. The word "individualism," as has just been indicated, is used in two distinct senses. It may mean the philosophical and psychological individualism that attempts to explain society and the State from the relations of individual men at first isolated (yet assumed to possess already all human

attributes), who afterwards find their advantage in the social union and in State-organisation ; or it may mean the individualism that places its political ideal in a life not authoritatively regulated from without, but developing itself spontaneously from within. These two "individualistic" doctrines have often been held by the same person : John Stuart Mill, for example, was an individualist in both senses. The views opposed to the two kinds of individualism have been similarly conjoined : Comte was an opponent of individualism in both senses. It does not follow from this, however, that either individualistic doctrine is a deduction from the other. The two meanings of the word, once distinguished, are at first sight sufficiently remote, and something more than the common name is required to prove their necessary connexion.

The doctrine opposed to philosophical individualism may no doubt be expected to have important practical consequences. Legislation may not improbably be suggested by it which had formerly no theoretical basis. So far the advocates of new kinds of State-action are in the right when they appeal to the modern theory. Where they are wrong is in dismissing as henceforth baseless all objections to State-action that are founded on appeals to individual liberty. Objections of this kind, it is now clear, will have to be met on their merits. Only two ways of meeting them are open. Either the individualistic ideal must be shown to be really bound up with philosophical individualism, and so to disappear when this disappears ; or the new kinds of legislation suggested by the modern doctrine must be proved not to be incompatible with the ideal of freedom. Before anything can be decided it is therefore necessary to determine the exact relations of each philosophical doctrine to this ideal.

First of all, then, it is clear that in either type of doctrine individual freedom is finally secure. For the individual alone has consciousness of himself. There is no "social consciousness" outside the individual mind. From this it follows that there can be no such thing as "collective happiness". The ultimate end of social life can only be attained by the individual. To the good of the individual, accordingly, social good must finally be subordinated. Now the good of each man can only be attained when all are free to seek happiness in their own way. Individual freedom, therefore, must be the ultimate end of the organisation of the State. And if it remains true that the good of society is to be preferred when it comes into conflict with individual happiness, this is because the existence and welfare of

society are the condition of there being individuals at all who are able to live in freedom. In ethics this is the justification for ascribing merit to acts of self-sacrifice. In politics it is the ground of the maxim, "*Salus reipublicae suprema lex*".

These are, in substance, the reasons given by Spinoza, and also by Mr. Herbert Spencer,—both in a sense philosophical individualists,—for the place assigned to freedom in their ideal State. The reasoning, however, does not depend on the theoretical individualism of their philosophical point of view. And if, now, we leave this final reply out of account for a moment, we shall find that the doctrine of Spinoza and of Mr. Spencer, in so far as it is philosophically individualistic, is capable of being turned against the ideal of individual freedom.

To put the argument first in a general form: the philosophical doctrine of individualism supposes that men on entering into the social union sacrifice part of the "rights," or powers of acting freely, which they had in the state of nature, in return for protection and other advantages. Civilisation, then, it would seem, must be a movement away from liberty. It will naturally consist in a gradual restriction of the freedom at first reserved, which becomes less as societies become more definitely organised. Turning to the particular doctrines in question, we find that according to Spinoza the form of political society in which there is most liberty is nearest to the "state of nature".[1] But the state of nature is a state in which there is no justice or injustice, but "all things come alike to all," because nature is yet unmodified by human law.[2] The state of liberty, then, it would seem, must be the lowest state. Mr. Spencer's conception of the social organism as built up out of individuals analogous to cells, at first only aggregated, afterwards becoming definitely grouped and coherent, and forming a hierarchy of parts, gives ground for a similar inference. For if, as Mr. Spencer affirms, the governing body represents the central nervous system, and if there is progress in the social organism, then its general movement ought, according to the analogy, to be in the direction of greater subordination of parts; this being the general direction of movement in the zoological series.

Of course these objections are not unanswerable, even from the point of view of philosophical individualism. From the point of view of the modern doctrine of the priority of society,

[1] *Tractatus Theologico-Politicus*, c. xx., § 38.

[2] *Ibid.*, c. xix., §§ 8, 20.

however, they do not merely vanish ; they turn entirely to the advantage of the "individualistic" ideal. For the individual is now conceived, not as matter to be organised, but as gradually emerging, from a primitive state in which he was only identifiable as a member of a class performing assigned functions, into definite recognition as a being with ascertained personal rights. The movement that presents itself as the characteristic movement of civilisation is not the restriction of a reserve of liberty, but the gradual growth of liberty. And by the new way of regarding society the good of the individual is more clearly seen to be something added to the good of the State, of which the good of the State is only the condition. When Mr. Spencer describes society as "super-organic," that is a typical expression of philosophical individualism. According to the doctrine of the priority of society, the individual man, in so far as the common life of society assumes in him distinct personal form, must rather be regarded as "super-social".

Carried to its logical conclusion, therefore, the modern doctrine opposed to philosophical individualism, instead of destroying the individualistic ideal, restores it in a more unqualified form. "Individuality" is no longer, as Mill described it, merely "one of the elements of well-being," but is that for the sake of which social well-being is in the end to be desired.

That this is the outcome of the modern theory of the relations of society and man becomes evident in Green's "Lectures on the Principles of Political Obligation".[1] According to Green, the ultimate end of political organisation is "moral freedom," that is, the freedom of the individual to become what he is capable of becoming as a moral being. To provide the conditions of moral "self-realisation" is therefore the function of the State. Now Green proceeds consistently from the basis of the anti-individualistic philosophical theory. What has been contended for is therefore strongly confirmed when he is found maintaining that freedom in some form is the final political end.

Green's definition of this end is doubtless open to the criticism that it excludes much that has hitherto been understood by freedom. Intellectual freedom, for example, was not the least important part of that which was contended for by such representatives of the older doctrine as Mill and Spinoza. How is intellectual freedom to be brought under Green's definition? The disciples of Green would probably make some such answer as this. Certain persons feel it to

[1] *Works of T. H. Green*, ed. R. L. Nettleship, vol. ii.

be "a duty," or a part of their "moral self-realisation," to attain clearness of thought on matters of general human interest. The "right," that is, the correlative of this duty must therefore be secured to them by the ideal State. Considerations of this kind, it may be granted, have some weight in enforcing a conclusion already arrived at. But would they be sufficient to establish this conclusion if it were questioned? It is plain that they would not. The governing powers would see in them little more than an appeal from the law of the State to personal "conscientious convictions"; and this is not held to be a sound political argument. If the liberty of thought and speech is to be permanently secure, free intellectual activity—apart from considerations as to its usefulness to the State, which will always count for something—must be seen to be a good in itself, not a mere condition of moral self-culture.

Although on this particular point Green would not have differed practically from Mill, it would be a mistake to suppose that it makes no practical difference whether we speak of "freedom" simply or of "moral freedom". There are indications in Green's political work of his approval of restrictions on personal liberty that Mill unhesitatingly condemned; and these can be traced to the limitation of his formula. The limitation, however, is due to the exclusiveness of Green's ethical attitude, not to the theory of society from which he sets out. In order to get rid of it, we have only to interpret "self-realisation" in a wider sense. The self-realisation of the individual being regarded, in accordance with Green's view, as the end for which the State exists, the political conception of freedom will necessarily be enlarged with the enlargement of the conception of individual self-realisation.[1]

But if the individualistic ideal is thus re-established, does it

[1] Green himself (in the *Prolegomena to Ethics*, p. 312) recognises the difficulty that there is in the way of admitting his ethical formula as a complete expression of all that is implied in human self-realisation. That all other ends, artistic and scientific ends included, shall be subordinated to the attainment of moral perfection for its own sake, remains, however, a fundamental position of his ethics. This position, in its connexion with his general system, carries with it logically the limitation of his conception of political freedom. Such a limitation, however, is not only, as has been said above, essentially unconnected with the theory of society which Green holds in common with later Experientialism. It is also—as the difficulty he felt partly shows—unessential to the type of philosophical thinking of which he is the representative. Without any appeal to the principles of another school, it may be corrected from "Scotus Novanticus's" *Ethica;* and the implicit correction of it is accepted by Prof. A. Seth in a review of that work in MIND x. 594.

follow that we ought to condemn all those activities of the State that are condemned by Mr. Spencer and would have been condemned by the greatest English political thinkers of the early part of the present century? What is to be said, for example, of interferences of the State with industrial competition? Does interference with the working of the industrial system constitute of itself an interference with individual liberty? In short, is the commercial and industrial policy of "*laissez faire*" a corollary of the ethical and political doctrine of Milton's *Areopagitica* and Mill's *Liberty?* An explicit discussion of this question will make clear what has been gained for political philosophy by the advance of philosophic theory beyond individualism. The conclusion that is come to on this special question is, besides, itself one of the chief applications of any philosophical system of political principles.

Now we know that the word "freedom," as it is often applied, has in reality nothing to do with freedom in the sense with which we are here concerned. "Free-trade," for example, as was pointed out by Mill, is not a part of the doctrine of individual freedom. The ground of the doctrine of free-trade is not that to prevent a man receiving foreign commodities free of special imposts deprives him of that personal freedom for the sake of which the State exists, but that unrestricted international exchange of commodities is commercially the most profitable mode of exchange. To take an entirely different example: the doctrine of "a free Church in a free State" may be a very good formula for modern times; but what has been called "the liberty of the Church" is not a part of personal liberty. When the Church is struggling with the State, what is really taking place is a struggle for dominance between rival powers. And the action of a powerful corporation aiming at dominance ought not to be confounded, although it often is, with the struggle of men for individual freedom. Again, the check that has long since been put on "the right of private war" was no doubt to those who were primarily affected by it an interference with their liberty; but this kind of interference with the liberty of some, it is universally admitted, is required in the interests of the liberty of all.

This last example suggests that the case is not otherwise with freedom of commercial and industrial competition. And Mill, if we may judge by his deductions from the proposition that "trade is a social act,"[1] was of opinion that

[1] *On Liberty*, c. v.

no interference with trade as such constitutes in principle a violation of individual freedom. Freedom of commercial competition, so far as it can be maintained, is rather to be based, in Mill's view, on grounds similar to the grounds for maintaining "free-trade" in the special sense ; namely, that the science of political economy shows this to be on the whole the best general condition for commercial activity. When the case is once definitely put, it seems clear that "commercial freedom," although it is often thought to be a deduction from the fundamental principle of individual liberty, is really a deduction from the principles of political economy. But political economy is an abstract science,—a science that treats of certain classes of social phenomena in isolation. Any change in the theory of society as a whole necessitates therefore a corresponding change in the mode of application of economical principles.

In order to determine more exactly the theoretical position of the State with regard to commercial and industrial activity, we may best proceed from Mr. Spencer's conception of "the social organism". For this conception, notwithstanding Mr. Spencer's own "individualism," must furnish the ground for any attempt to go beyond individualism in practice. The social organism, according to Mr. Spencer, like the biological organism, may be divided into certain systems of organs. There are the organs whose function is "sustentative" and the organs whose function is "protective". The former constitute the industrial organisation, the latter the military organisation ; the governing body of the State representing the central nervous system. Now the system of organs that is for defence and attack in the animal organism is under much stronger and more continuous central control than the system that is for sustentation. Hence it is inferred that the same relation should exist in the social organism. Direct social consideration, it is further contended, establishes a concomitance of the growth of industrial and of general freedom. Societies normally go through a stage of "militarism" followed by one of "industrialism". In a society of the industrial type, the sustentative system, interfered with at all points during the militant period, has emancipated itself from central control, and now forms a system working independently. The industrial type of society is in all social and political relations freer than the militant type.

It may be admitted that the association of a certain measure of general freedom with a certain growth of industrialism is a plausible historical generalisation. At the same

time, it is clear that the withdrawal of State-control from a group of subordinate organisations is not quite the same thing as the emancipation of the individual. And indeed where the industrial organisation is most free from central control it becomes itself a power to control the individual just as effectively as the State has ever done.

The military and industrial systems are, in truth, both alike comparable to those systems of "reflex mechanisms" conceived by modern physiology. All such mechanisms are subordinate to the total life of the organism; and although central control is of a different kind in the case of the "sustentative" functions, it is just as much present as in the case of the "protective" functions. The life of individuals in the State, according to Mr. Spencer, is comparable to the life of cells. Now a physiologist, considering the interests of the cells, would probably find that they are free to get the greatest advantage in the common life of the organism when the particular mechanism of which they form part is well controlled by the central nervous system and balanced with others so as neither to suffer from excess nor defect of function.

The essential thing, however, is to note that the industrial system is a mechanism subservient to the general life of the State, not a group of individuals striving to develop themselves freely and only hindered by State-interference. This is recognised by Mr. Spencer himself in the following passage of the *Principles of Sociology* :—

"Were this the fit place, some pages might be added respecting a possible future social type, differing as much from the industrial as this does from the militant—a type which, having a sustaining system more fully developed than any we know at present, will use the products of industry neither for maintaining a militant organisation nor exclusively for material aggrandisement; but will devote these to the carrying on of higher activities. As the contrast between the militant and industrial types is indicated by inversion of the belief that individuals exist for the benefit of the State into the belief that the State exists for the benefit of individuals; so the contrast between the industrial type and the type likely to be evolved from it, is indicated by inversion of the belief that life is for work into the belief that work is for life. But we are here concerned with inductions derived from societies that have been and are, and cannot enter upon speculations respecting societies that may be."[1]

The question here suggests itself, Cannot movement towards this future type be better promoted by conscious action through the State than by leaving the industrial type to work itself out? Mr. Spencer himself expects the transformation to take place entirely by individual effort and voluntary asso-

[1] *Principles of Sociology*, vol. i., 3rd ed., p. 563.

ciation. The interference of the State, he would say, can only retard it. This admission, however, seems necessary: that if the State were to attempt to promote the transformation described, it would be acting, whether rightly or wrongly, in the interests of individual freedom, not for its suppression. It would be attempting, in fact, to economise the expenditure of activities which, unless they are regulated by conscious human agency through the State, must inevitably be mechanically determined, either by the operation of natural forces or by the industrial mechanism, impersonal in its action as a natural force.

Further, it may be contended that if Mr. Spencer, in this passage, is not to be interpreted as meaning that in the future the "higher activities" will be promoted with more direct intention by the State, there is no ground for establishing a difference of possible from actual *types* of societies at all. For there have always been a few thinkers who have recognised "higher activities" than commerce and war as the true end of social life; and it would be an injustice to the societies, "militant" as well as "industrial," of the present and the past, to say that nothing has yet been done by them to make such activities possible. Among the republics of antiquity, for example, the entire sacrifice of the true end of the State to mere military efficiency, as by the Spartan legislation, was not universal. And, to come to modern times, is it not conceivable that the exaggerated development of an industrial as well as of a military system may tend to suppress the higher activities; that English Industrialism as well as German Militarism may have its dangers for the real freedom of the individual? If these dangers exist, then, to judge from the physiological analogy, defective central control must exaggerate them in the "industrial" just as excessive central control exaggerates them in the "militant" type.

Whatever application may be made of it, the conclusion is clear. State-interference with industry, whether judicious or injudicious, is in no way inconsistent with the principle of individual liberty. Always in subordination to the supreme end, the State may put checks on commercial competition, or regulate the whole industrial system as it pleases, with a view to any social good that may be regarded as an intermediate end,—say the vitality of the race or the diffusion of leisure. The condition of its effective action is adequate knowledge of industrial causes and effects as attained or attainable by scientific economics. Thus the determination of the means of bringing about a given result becomes a

question of applied economical science. To ascertain whether the result itself is desirable is a question of general politics.

The mode of consideration adopted by Mill in fixing the limits of State-action, as has been already suggested, is, in spite of his theoretical individualism, not inconsistent with this conclusion. He finds, for example, that in certain special cases freedom to buy and sell commodities is a condition of personal liberty, and that it is to be maintained for that reason, not because the mechanism of exchange of commodities ought in general to be unrestricted.[1] Again, he discusses a particular case of regulation of hours of labour, and finds, on principles generally applicable, that State-regulation is justified.[2] But ought we not to go further than this? Would not the conclusion arrived at justify the State in taking over the whole industrial system and working it by its collective authority? A proper apportionment by the State of those works that are necessary for the maintenance of the life of the community might, as some socialistic thinkers have contended, secure the greatest amount of liberty on the whole; and thus the only possible objection is obviated.

The conclusion, however, that the State may justifiably interfere with the industrial system does not imply that it ought always to interfere. There is, first, the condition that it should have adequate knowledge. The admissibility of State-socialism, then, is reduced (if we assume it to be otherwise consistent with freedom) to a question of applied economics. Now, one possibility is that economical science may prove the interference of the State to be in all cases injurious. This is the view of Mr. Spencer and of many "orthodox" economists. A second possibility is that in the hands of its later students it may demonstrate the socialistic position. But there is also this third possibility: that while the older economists have shown the interference of the State to be in many cases injurious, there are still cases in which State-action may be proved from the basis of economical science to be effective for other purposes than "negative regulation".

Political economy, so far as it has been scientifically treated, probably gives sufficient grounds for concluding against the extreme socialistic position that the community ought to assume direct command of the whole industrial system. The scientific character of the older economics is confirmed by

[1] *On Liberty*, c. v. [2] *Ibid.*, c. iv.

the influence of its generalisations on other sciences. The stimulus its doctrine of the division of labour gave to physiology and the influence of Malthus on Darwin are well known. Mr. Spencer's biological analogy, again, confirms both the procedure and the results of "abstract" political economy: its procedure, because the industrial organisation of society is found to be analogous to a subordinate system of reflex mechanisms capable of being studied, up to a certain point, separately from the rest of the organism; its results, because the industrial organisation is found to be analogous to that system of reflex mechanisms which normally works with least central control. These results, if accepted, limit very much the prospects of effective State-action. At the same time, both Mr. Spencer's analogy and economic science still leave open the possibility that actions from the centre, not minutely regulative as in the case of a military system, but regulative in a general way, may subserve the higher interests of the State. What prevents such possibilities from being considered is on one side the temporary eclipse of scientific economics, on the other a traditional opinion that all *positive* applications of economic science by the State are inconsistent with individual freedom. The eclipse of economics is accounted for by resentment at the limits that it appears to have placed, once for all, to State-action of some kinds. The objection made to increased State-action by those who are unwilling to sacrifice individual freedom, and the neglect to answer it on the part of those who advocate new activities of the State, are alike due to identification of the two senses of the word "individualism". On each side, therefore, we may find ground of hope. For within the limits of science there are always chances of discovery both of new laws and new applications of old ones; and, as has been seen, the organisation of industry in the higher interests of the State is in no way essentially opposed to individual freedom, but is rather a necessary condition of freedom.

IV.—ORIGIN AND VALIDITY.

By D. G. Ritchie.

When Aristotle, after tracing the progress of human society from the patriarchal family to the city-state of the Hellenes, says that the city-state comes into being for the sake of life, but has its being for the sake of the good life, he gives an admirable illustration of a distinction which he is always ready to recognise between the origin of anything (its material cause—*ἐξ οὗ*) and its final cause (*τέλος*), *i.e.*, the end which it comes to serve: this latter must be known if we are to know the true nature of a thing (*ἡ δὲ φύσις τέλος ἐστί*). This distinction has not lost its significance, though it has been overlooked in many philosophical and other controversies. The question that sometimes arises in social circles which are careful of their dignity: "Who is so-and-so?" is frequently solved by consultation of the peerage, or, at a lower elevation, of some old lady: and the oracle answers by telling who his great-grandfather or great-grandmother was, the value of a man (or woman) for certain purposes of society being supposed to depend not on what he himself is, but on what some ancestor had the reputation of being. Pride of birth is, indeed, sometimes supported by the scientific doctrine of heredity, though it is apt to be forgotten that the kind of eminence which has qualified men in times past for elevation to the peerage has not always been such as to make the transmission of it desirable in the interests of the whole social organism as that now is. And, further, it is forgotten that, if a man's great-great-grandfather was a really great person, the man is probably only in respect of $\frac{1}{16}$ part of himself the hereditary representative of that ancestor. And, yet again, it is forgotten that not merely inherited capacity, but a favourable environment in which it can be exercised, is requisite for the production of the best type of individual; and that such favourable environment is not always provided by an atmosphere of adulation and the absence of the stimulus to industry. The popular respect for pedigrees involves to a great extent the confusion of origin and worth. "He is nobody" means, being translated, he is without father or mother—of note: and when such a person really impresses the world, it is often found expedient to discover for him some dignified descent, in order

to satisfy the popular prejudice. This prejudice has invaded more important spheres. The great men, not of Hellas only, came to be looked on as the sons of gods and demigods. People have found it difficult to believe that those whom they felt to be immeasurably above them, could be born of ordinary parents and according to the ordinary laws of human generation.

There are many estimable persons who derive great comfort from abusing metaphysics; and it is a pity that they should not be able to indulge their inclinations in a harmless way. Therefore it would be desirable if we could mark off a certain meaning of 'metaphysics' and 'metaphysical' in which they shall denote what is bad, reserving the liberty to employ these terms for something that is not only unobjectionable, but necessary. Let us say then that, from an Idealist point of view, we are ready to admit all the hard things that Comte has said of the old Ontologies, and to declare that we are as anxious as he to eliminate the influence of them from theory and practice; but that we consider such clearing of the ground will be even more effectually carried out, if we do not shirk an investigation of the conditions under which knowledge and nature and conduct are possible. Nay, we are prepared to argue that just those persons who disclaim metaphysics most are sometimes apt to be infected with the disease they profess to abhor—and not to know when they have it.

One of the chief characteristics of the 'metaphysical' stage of thought is its anxiety to vindicate the value of moral and other ideas by tracing them back to an origin which can be regarded as in itself great and dignified, whether the greatness and dignity be such as come from the clearness of reason or, as is often supposed, from the darkness of mystery. Thus, the true religion has been represented as a primitive revelation from which man afterwards fell away. "Degraded savages" have been supposed to be all *de*graded in the literal sense—degenerate from an originally better condition. There has been a preference for regarding man "as a fallen archangel, not as an elevated ape". The natural rights of man, *i.e.*, those rights which it is felt man ought to have guaranteed to him in a well-ordered society, have been thought of, or at least spoken of, as if they had been originally possessed by him and stolen away by the wickedness of tyrants and oppressors. The poet uses the language of such "*Vorstellungen*" to express ideas: and so we find Heine saying that the Holy Spirit

"renews ancient rights" (*erneut das alte Recht*). Reform has been again and again brought in under the guise of restoration, sometimes indeed (as in the struggles of the English Parliament in the seventeenth century) with some degree of historical truth. So also with regard to the individual mind. Ideas, either in logic or in morals, which are of peculiar importance, have been called "innate". They have been "implanted by God (or Nature) in our breasts". We have only to look deep enough to find them beneath the superimposed crust of prejudice, experience and conventional belief. The voice of God and Nature may be heard if we go back to primitive simplicity: and thus we have the "noble savage" of eighteenth century imagination and the pseudo-Platonism of Wordsworth's "Ode on Intimations of Immortality from Recollections of Early Childhood". But very little can be found by the searcher after primitive uncorrupted intuitions, either in the infant or in the savage, except what he manages to read into their undeveloped minds out of his own theories. Yet the temptation is strong to regard the inexplicable (or at least the unexplained), the unanalysable (or at least the unanalysed), with peculiar veneration, and to feel jealousy and suspicion of any attempt to examine the elements and origin of anything that is valued or admired.

"I ask not proud philosophy to teach me what thou art,"

says Campbell, as if the colours of the rainbow became less beautiful when we know scientifically how they arise, than if they had been provided by a mechanical miracle for the disembarcation of Noah. To the poet, certainly, the physical cause of the rainbow is less attractive than its possibility of being the symbol of a message of peace and promise. But such feelings are out of place when they intrude themselves, as they sometimes do, into the estimation of the truth of a scientific theory. The prejudice against the Darwinian theory implies that, if the higher organism be the product of the lower, the higher loses in worth and dignity, as if "man *came from* a beast" implied "therefore man *is* only a beast". The prejudice against anthropological investigation of the origin of religious ideas and customs and of institutions such as marriage has a similar source—a prejudice to be found even amongst those who have themselves done notable service in the application of comparative and historical methods to the study of human society and ideas. It is supposed that religion loses its value if even its highest orms have an ancestry so low as fetish-worship, and that

marriage loses its sanctity if "primitive marriage" turns out to be a euphemism for promiscuous sexual relations.

Perhaps, however, there is an element of truth in the suspicion with which scientific analysis is regarded by most poets and by some philosophers. It is a true instinct which warns us, that we have not sufficiently disposed of a subject when we have given an historical account of how it came to be what it is: but this takes a false form, when it becomes a denial of the historical account. As against the 'metaphysical' theories of Nature, Innate Ideas, Inexplicable Intuitions (which may happen to be only local or personal prejudices), the scientific methods of analysis and theories of evolution may be allowed complete validity, and it may yet be possible to deny that the real importance of ideas in logic, in ethics or in religion is affected, when it has been shown that they have a history in the minds of the race and of the individual. This history is important for our knowledge, and may alter many things in the way in which ideas have been accepted and institutions regarded; but, over and above this natural history, we have the task of philosophy—of metaphysics in the sense in which the world never can and never must dispense with it. This is, of course, a proposition which has been disputed. Either it may be denied that we need anything more than an explanation of how things have come to be in order rightly to understand what they are, or it may be denied that we can discover any answer to the questions which we inevitably find ourselves asking after the sciences have spoken their last word. To the latter position (that of the Positivist) the objection is the same as that which may be made to all schemes of scepticism: How can you know the limitations of the mind, unless you who are limited are also in some way outside your limitation? It may be said: 'We find out our limitations only too surely by beating fruitlessly against the bars of our prison-house'. But why do we do so? Why have mankind always done so, if it is not from the instinct that a larger life is their natural one, in the sense of being their due? 'Yes,' it may be said, 'but we learn wisdom with time and shall give up trying to avoid the inevitable.' But how, if in every step of advance made within the limits, there are already involved assumptions which imply that we in some way set our own limits? With the complete sceptic it is impossible to argue: he must be left to doubt his own scepticism, and so to contradict himself. Assume the validity of the processes of scientific knowledge. Assume, as the mathematician does, the absolute certainty of his processes and of his results, so far

as they conform to his processes. Assume, as the student of nature does, the relative certainty of his methods and results. How can we make these assumptions about the necessities of thought, about space, about the orderliness of the physical universe? J. S. Mill boldly faced this objection to the satisfactoriness of psychological analysis: he denied the certainty of mathematics, and based the most trustworthy of inductive processes upon the least certain—the *Inductio per simplicem enumerationem*. But this mode of defence really leads to a complete scepticism or to a complete surrender of the problem to be solved. The lasting and permanent contribution of Kant to philosophy is his recognition of what the real problem of the theory of knowledge was, and what were the conditions of its solution. Assuredly there are different interpretations of Kant and different estimates of the relative importance of different parts of his system: but I consider that *the* point on which we must all always go "back to Kant," and on which we cannot go back behind him, if we are profitably to face the problems of philosophy now, is his conception of a "transcendental proof," and his view of the *à priori* element in all knowledge. The Kantian recognition of an *à priori* element in knowledge has almost nothing in common with psychological theories of intuitionism, which are only revivals or survivals of the old 'metaphysical' (in the *bad* sense) doctrines of innate ideas. The name *à priori* is unfortunate because it suggests a reference to time, which is irrelevant and misleading. Kant does not mean that the individual *begins with* certain mental forms and *then* goes on to fill them up with a content derived from experience. If that were the *à priori* theory, as it is often supposed to be, it would be a theory very easy to refute, and a very absurd delusion to maintain. "The baby new to earth and sky" does not start with a knowledge of geometrical or other axioms. The psychologist has every right in saying that knowledge begins as sensation. That is true as a matter of mental history. He is only wrong, when he goes on to say that knowledge is nothing but sensation and the products of sensation, unless in the term 'products' (or any equivalent term) he has tacitly implied the recognition of thought as what makes the development of knowledge out of sensation possible. Kant's individualist mode of treating the problem of knowledge certainly seems to countenance a psychological [1] interpretation. But so far as it does, that must be put aside

[1] If the meaning of Psychology were so extended as to cover Kant's theory of knowledge, that would involve an inconvenient deviation from the general use of the word.

as the perishable part of Kant's theory. I may be interpreting wrongly ; but I take the essence of the transcendental proof to be what I am going to state, and I cannot see that such a proof admits of any refutation, except from the consistent sceptic who, as said before, must be left to refute himself. It is not entirely a discovery of Kant's : Plato and Aristotle were at least on the verge of it; and the various systems of Metaphysical Idealism may all be considered as, amid many errors, feeling after it.

If knowledge be altogether dependent on sensation, knowledge is impossible. But knowledge is possible ; because the sciences exist. Therefore, knowledge is not altogether dependent on sensation. It is no refutation of this argument to say : ' Here is a history of the genesis of knowledge from sensation '. Because the argument is not a statement of a fact in psychology (psychogenesis), but is entirely logical. The denial of it involves all our experience in contradiction. That is the ultimate argument, and, as we have said, will only be denied by the complete sceptic.

What this non-sensational element is must be discovered by taking the different stages and kinds of knowledge separately. And there is no reason why Kant should be right at every step here. The details of the Kantian philosophy may come to have little more than an antiquarian interest. The simplest act of knowledge is the judgment. Judging involves comparison. Comparison requires that the different sensations should be held together in unity. (All this follows logically without any reference to psychology, though psychological experience may well come in as a test.) If I say ' It (*i.e.*, anything what is presented to my senses) is warm,' I am asserting an identity along with difference, as existing *for me*. One sensation could make no knowledge, nor one series of uniform sensations; nor a series of different sensations, unless they could be brought together for comparison, and this bringing together cannot be actual, but must be ideal, *i.e.*, a Self is implied in the simplest act of knowledge. If it is said, ' It is true that as we know now, a conscious self is implied in our knowledge, but that conscious self is the result of a long process '—that may be accepted (or not) as a true statement of the history of mental development; but that does not do away with the logical force of the argument. It is not asserted that at an elementary stage human beings have any conception of self-consciousness nor any word for it, nor that they have reflected on it, but only that the self-consciousness must be there potentially, implicitly. ' But what about the lower

animals? If we cannot draw a hard and fast line between lower and higher, is not the recognition that man may be developed from lower animal forms fatal to the recognition of a non-sensational element is human knowledge?' To this it may be answered: (1) All inferences about the 'knowledge' possessed by the lower animals are rendered extremely uncertain, because we have no means whatever of communicating with them by language, and consequently interpret their actions on the analogy of externally similar actions done by ourselves. All tales about the cleverness of dogs, &c., are full of unscientific anthropomorphism. It is well known how difficult it is fairly to interpret the ideas of lower human races, because of the imperfections of their language. When language is wanting, the difficulty becomes insuperable. (2) There seems no objection to admitting that, so far as lower animals possess anything that can be called knowledge, *i.e.*, so far as they can be imagined actually to make judgments, as in applying human analogies to them we always suppose them to do, so far they must have a consciousness of a self, though at some immeasurably lower and less explicit stage. If we say their life is one of mere sensation, and yet ascribe to them a power of making judgments, their 'sensation' must be a sort of 'obscure thinking'.

Thus, when all has been said that can be said by physiology and psychology about the way in which thought arises out of sense, this, however true as a statement of historical facts, does not solve the problem of *what knowledge is*, unless it be regarded as a process in which Consciousness (thought) is coming to itself. What we find at the higher stage is no new element suddenly inserted alongside of other elements, nor is it a mere chemical product of elements different from it (chemical analogies lie at the base of many current psychological theories), but is what we are logically bound to regard as present throughout, though only fully realised and known at the higher stages. If it be said, that this is only importing a mystical metaphysics into what was already clear, then we must answer that without this mystical metaphysics the theory was not clear, because it could only be expressed by the use of a number of terms which had not been explained. It is sometimes thought that, by saying 'The lower is *potentially* the higher,' or 'contains the potency and promise of the higher,' all has been said that need be said. But what is meant by saying 'A (*e.g.*, the acorn) is potentially B (*e.g.*, the oak)'? If it merely means 'Here you have A, afterwards you will have B,' it would be better simply to say so; for then it would be made

obvious that no explanation of B has been given, and that neither A nor B is understood. 'A is potentially B,' if it means anything, must mean that in some way A already is B, and that B is needed to explain A. The late G. H. Lewes was not prejudiced in favour of old philosophies, but he most fully recognises the fact that we can only understand the lower from the point of view of the higher: "We can only understand the Amoeba and the Polype by a light reflected from the study of Man".[1] So that even within the sciences it is not really possible to 'begin at the beginning'. The attempt to do so will generally mean that some dimly accepted view about the "end" is influencing the observations of the beginning; for, as Lewes reminds us, "our closest observation is interpretation". Even for the study of origins an examination of the end or most complete state *as it exists* is not superfluous, and such an examination, apart from historical methods, must be analytic, or, in Kant's phrase, *critical*. Before we proceed to ask what history tells us, it may be worth while to ask what history can tell us. By knowing what something *was*, we do not always know what it *is*, sometimes only what it (now) *is not*.

To discover the *à priori* element in knowledge, *i.e.*, that element which, though known to us only in connexion with sense-experience, cannot be dependent upon sense-experience for its validity, is the business of a philosophical theory of knowledge. And if we call that a part of Metaphysics, it is a Metaphysics with which we cannot dispense. Suppose that 'Self-consciousness,' 'Identity,' 'Substance,' 'Cause,' 'Time,' 'Space,' be amongst the 'Categories' so discovered, to arrange these categories in a system, to see their relations to one another and to the world of nature and of human action, will be the business of Philosophy or Metaphysics in a wider sense. 'Speculative Metaphysics,' as distinct from Critical, we might call it, because the method it must adopt can never have the logical precision and certainty of the Critical Method. The only test of the validity of a system of Speculative Metaphysics must be its adequacy to the explanation and arrangement of the whole Universe as it becomes known to us. Thus *this* Metaphysics can never be complete, but must always be attempted anew by each thinker. The Critical examination of the nature of knowledge *may* logically precede any or all of the special sciences, although it is only the advance of science that has suggested the need of such an examination; but the Metaphysician in this second sense can never be independent of any of the

[1] *Study of Psychology*, p. 122.

sciences or of any branch of human knowledge or effort. *They* are his material.

To make knowledge possible there must (in Green's phrase) be "a comparing and distinguishing self"; but since Time, though relatively a form, is yet also one of the contents of knowledge, this self must in some way be independent of Time. I know I am a series of experiences in Time. Therefore, in some way, I am not in Time—but an Eternal (*i.e.*, Time-less) Self-consciousness. But the Critical Philosophy can tell us nothing further, can tell us nothing as to what this Eternal Self-consciousness is or how it is related to our individual selves, which are the subject-matter of Psychology. The attempt to find some expression for this relation, *i.e.*, to show how an Eternal Self-consciousness reveals itself in Time and in Space is the business of Speculative Philosophy or Metaphysics. That there is an Eternal Self-consciousness we are logically compelled to believe, and that it is *in some way* present in our individual selves; but *in what way* is a matter of speculation: and it is still quite competent to any one who accepts the main result of the critical examination of knowledge to maintain that this latter problem is altogether insoluble; although it is a problem (or rather series of problems) which we cannot leave alone, because we are met by it at every step in our ordinary experience, if we only begin to reflect on the meaning and mutual relations of the conceptions we are obliged to use.

It is not our present concern to give an exhaustive list of the *à priori* conceptions and principles which are involved in ordinary knowledge and in the procedure of scientific investigation and proof. An Intuitionist Philosophy, which professes to get at these principles by a simple introspection into the contents of consciousness, may fairly be met with the challenge to produce its list of intuitive principles. But if the term *à priori* be understood in the way which has been explained above, no such challenge can be justly made. It is only as experience progresses that we can become fully aware of and can formulate the conceptions and principles which that experience logically involves. Only if knowledge were completed, could we know all that knowledge implied: and it is only as knowledge approximates to that apparently ever-receding goal that we can enlarge our view of what has been there implicitly from the first. Thus, in the very simplest acts of thought the principle of Identity and the principle of Contradiction (A is A; A is not not-A) are involved; and yet it was late in the history of mankind when the science of Logic was first enabled to discover and formulate these principles. Nevertheless they are *à priori* in the

sense that without them all knowledge would be impossible. So it is with the axioms of the science of quantity. That "things which are equal to the same thing are equal to one another" is implied in all the experience which Mill thought went to prove the principle. Every carpenter who uses a foot-rule, every barmaid who draws off half-a-pint implies the principle and acts on it, though totally ignorant of the elements of Geometry. Similarly, the rudest ideas about Nature imply the conception of *a* Cosmos, of *an* order of nature, though that order may include gods, demons, fairies, and goblins, of whom the modern scientific man takes no account, and may exclude gravitation, electricity, and other forces which he has come to recognise. The principle that every event has a cause, *i.e.*, is related to some other event (or events) without which it would not happen and with which it must happen,—the two clauses of this definition of cause are sometimes mistakenly separated as the principles of Causation and Uniformity of Nature respectively,—is involved in the mental action of the savage who hears the thunder and looks round for an explanation, though he may be quite wrong in his explanation, and though it may be late in time before any human being comes to reflect on the processes of experience and to formulate its principles. But the history of how men came to recognise Uniformity of Nature and how their conceptions of Cause and of Nature have varied is one thing: the logical character of the presupposition of all inductive inference is another. The former is a question of historical psychology; the latter of philosophical criticism. The proposition, "Every event must have a cause" is not *à priori* because it convinces every person the moment he understands it, but because no knowledge of natural events is possible without a connexion of them with other events as belonging to one system of nature. That nature is a system is the assumption underlying the earliest mythologies: to fill up this conception is the aim of the latest science. A capacity for discovering true causes *may* be capable of development as the race advances; so may be a capacity for philosophical analysis; but the presupposition of all investigation of causes cannot itself be derived from the experience either of the individual or of the race.

The question for the logician is not: 'How have I (or mankind generally) come to believe this?' That is a question for the psychologist and sociologist. The logical question is: 'Why am I or any one else justified in believing this?' A confusion between these two questions underlies Mill's famous attack on the Syllogism. The essential and permanently significant portion of the Aristotelian doctrine

of the Syllogism is the recognition that all inference (and *συλλογισμός* just means 'inference') implies a Universal. As a psychological fact there *may* (though even this may be questioned) be in our minds a particular proposition and then immediately afterwards another particular proposition suggested by it. But, if the one can be described as an inference from the other, we must be able to answer the question why we get the one from the other. And the answer to the question must, if we formulate it, take the form of a universal proposition, of which, till we have to face the question, we may be perfectly unconscious, and will constitute the major premiss of the Aristotelian Syllogism (*Barbara* or *Darii* being taken as typical), the middle term being, in the scientific inference, the cause or ground (sufficient reason) of the conclusion. Thus the death of some one I know may suggest to me my own mortality; but the reason of the inference is our common possession of the attributes of human and so of animal life. It is always with a question of validity that the logician as such has to deal: 'Are we justified in inferring that?'—not with the psychological process through which any particular person or persons have gone in arriving at their beliefs. Psychological introspection can, therefore, never solve logical difficulties. The formula of the Syllogism (major premiss, minor premiss, conclusion) is not an exposition of what actually takes place in any one's mind, but a logical exposition of that to which any actual inference must conform in order to be *correct*. It would not even be accurate to say it is the form according to which the *normal* reasoner actually reasons; because a man may reason quite correctly and be the normal reasoner while quite unconscious of logical analysis. The reasonings of the normal reasoner are those which will conform best to the strict syllogistic form, when they are so analysed by the logician. The incorrectness of an apparent inference becomes clear, when the reasoner is compelled to formulate the universal according to which he is reasoning, though without being aware of it. If he were fully aware of it, he could not commit fallacies. If we were fully aware of everything that every proposition implies, we could not assert false propositions.

Take another logical illustration, a minor matter. Mill says that proper names have no connotation. It may be true enough that the name 'John Smith' suggests nothing to me or to you; but, if I am a philological ethnologist, it may suggest a good deal; if I have a friend of that name, it may suggest a good deal more. These are matters of psychological interest, and no definite answer independent of time,

place, circumstances and persons can be given. But the name of an individual, not as a mere word, but *as* the name of an individual, must logically have an infinite connotation. That we can say quite definitely, and that is the reason why the proper name cannot be defined. Any given person may be unable to say anything about any given proper name; whether he can or not is a matter of fact. But logic has to do with the ideal possibilities of definition. And we can answer quite certainly: We never *can* exhaust the signification of the individual.

The controversy whether mathematical judgments are analytic or synthetic is of a similar kind. As a psychological question it is a matter of degree, and, in the case of arithmetic, will depend solely on the extent to which a person has learned the multiplication table, &c. This is one of the merely psychological distinctions that intrude themselves into Kant's theory of knowledge. Whether any proposition conveys any *new* information to a person is always a question which cannot be answered irrespective of time, place, &c. In one sense nothing we ever can learn is new, else we could not learn it: it would be quite irrelevant to our already existing knowledge. (This is the truth in the old Sophistic paradox.) In this way all reasoning is reasoning in a circle; but it is a circle so large—as large as the Universe—that we need be under no immediate fear of completing it. To omniscience all propositions must be analytic (identical). That is the ideal of knowledge, and it is the standard by which all statements and all professed inferences are ultimately judged. This amounts to saying, in other words, that the inconceivability of the opposite is the ultimate test of all truth. Only it is a test that we cannot safely apply in practice, except where we can be perfectly sure that we have eliminated all risks of ambiguity and have fully realised all the conditions under which we are making an assertion. Thus we can only safely apply it in very abstract sciences, such as geometry. We know exactly what we mean and what others will understand by a "straight line" and by "enclosing a space"; and therefore we can quite certainly say "Two straight lines cannot enclose a space"; because to suppose that they do involves us in contradiction, and would make us assert that the straight line was also not a straight line. But, if any one at the beginning of this century had said 'It is inconceivable that a message should be sent from London to New York in a few minutes,' his statement would only be correct if he were to insert the qualification: 'the modes of transmitting messages being such as I know of'; for then it would be

true that we could not really think of the carrier pigeon, *being what we know it to be*, traversing space with such velocity.

Logic, then, is concerned not with what actually goes on in the mind of any individual or of the average individual. That is the business of psychology. Logic is concerned with the rules or ideal standards to which the mental processes of every one must conform if they are to attain truth. Parallel with logic there are at least two other Regulative Philosophical sciences (branches of philosophy)—concerned respectively with those rules or ideals which must be fulfilled for the attainment of Beauty in Art, and with those which must be fulfilled for the realisation of Goodness in conduct. The presupposition of knowledge was found to be the presence of a Self which is Eternal and which yet is never completely realised in any one of us, and which thus remains as an Ideal (*Sollen*) perpetually urging to its realisation. If we approach the study of mankind from the side of Nature, we find everywhere a "groaning and travailing," not, as has been too readily supposed, a universal pursuit of pleasure, but a universal struggle and a seemingly hopeless struggle to escape pain, whether the pain of physical, emotional or intellectual suffering. A dispassionate view of the process of evolution seems to leave no escape from a philosophy of despair; for, as the struggle for existence eliminates some physical evils, it intensifies the acuteness of emotional and intellectual desires, and increases the ever-recurring pain that comes from the perpetual incapacity of satisfying a want and a craving which grow with every satisfaction. But, if the necessity of endeavouring to explain how knowledge is possible compels us to recognise an Eternal Self ever demanding realisation, may we not, looking back now from the standpoint of the Ideal, regard all the blind struggle of Nature as the lower and unconscious phases of this process of the realisation of the Eternal Self? This identification would be a hypothesis of Speculative Philosophy, and could not have the certainty of the mere recognition of an Eternal Self; but it is the theory which seems best to explain all the phenomena, and it does not conflict with any scientific fact, although undoubtedly incapable of scientific verification. From the side of origins the struggle seems vain, and yet we can only pronounce it vain, because we have in us an ideal standard by which we judge. We can only know that the crooked is crooked if we have an ideal of the straight; we can only know that the world is evil, if we have in us an ideal of absolute good. We know our ignorance, because we have an ideal of perfect know-

ledge; we know the ugliness and discord of the world, because we have an ideal of perfect beauty and harmony; we know its wickedness, because we have an ideal of a perfected society; we are conscious of sin, because we know that our true self is God, from whom we are severed. How these various ideals grow up in the minds of mankind, and how their content varies at different periods, is matter for the psychologist and the historian. But why there are such ideals at all can only be explained if we start from the side of Philosophical Analysis.

Æsthetics might, on grounds of etymology, be considered most properly to be concerned with the question, how we (whoever the 'we' may be) have come to judge this or that to be beautiful—which is a question of psychology. But we want some name for the philosophical science which attempts to solve the question, why this or that *is* beautiful; or rather, to put the question in a form that seems better to avoid the assumptions of the old ontological metaphysics which we have discarded, why this or that *ought to be* considered beautiful. For it will not do to say: 'That is beautiful which is generally considered beautiful,' since, least of all in matters of artistic taste, is the person of taste ready to accept the opinion of any chance persons. If we say, 'That ought to be considered beautiful which is considered beautiful by the person of taste,' we have only transferred the ideal to the person, because then we mean that he is the person whose judgment *ought to be* accepted. He says 'I now consider this beautiful, and, if I am right, people will gradually come to acknowledge it,' *i.e.*, he gives out his judgment as his own, and yet not as a judgment of a mere subjective liking, but as one that has a claim to have an objective validity—to be valid for all, if they could only come to see as he sees. I am assuming the person of taste to be a healthy-minded critic who expects and wishes his judgments to be accepted and does not pride himself on having a peculiar taste, which no one except himself and his own small set will ever share; others may not share it as yet, but unless he expects others to share it, his judgment only claims a subjective validity, *i.e.*, it means only 'This pleases me,' *not* 'This is beautiful'. Neither in explaining the work of the artist nor in explaining the judgment of the lover of art can we leave out the conception of an ideal—an ought to be. All the attempts to reduce this to a statement of 'what *is*' bring in the conception in some concealed form.

Similarly in Ethics. If the moral law be expressed as "that which the good man *does*" (as by Mr. Leslie Stephen),

then in "good man" we have brought in the conception of *ought* which has been eliminated from "law". How we (the race or the individual) have come to think this or that right is a matter for sociology and psychology—it would be the history of moral ideas and the psychology of the moral sentiments; but these do not explain why there should be any thinking right or wrong at all. The old Intuitional Ethics assumes certain absolute principles of right and wrong, and thus comes into direct conflict with scientific investigations into the origin of moral ideas. The theory of Idealism for which we are contending only maintains that all accounts of the evolution of morality are inadequate to supply a complete theory of Ethics, unless the presence of *an* ideal to all human effort be recognised as involved in the presence of the Eternal Self which any account of knowledge or conduct presupposes. What the ideal at any time may be, *i.e.*, the content of the ideal, is a matter for historical investigation. The ideal must vary, else progress would be impossible. But there must be *an* ideal, a judgment of "ought," else morality would be impossible.

The same thing becomes clear when we pass to Politics. Intuitions as to natural rights only prove delusive. We cannot settle in that way what the state ought to do and what not. As already said, 'natural rights' is a misleading phrase if supposed to refer to some original rights of man; practically it can only mean 'What man ought to have'. So, too, it is unhistorical and, what is worse, illogical to say that society originated in a contract; for contract presupposes society. But there may be a very good sense in saying that society ought to be "contractual" (M. Fouillée's phrase), *i.e.*, that members of a good state ought to feel that the laws which they obey are not the commands of an alien force but are self-imposed, so that obedience to them becomes the highest realisation of freedom. Theories which treat the state as analogous to a natural organism err in an opposite way from those which regard it as resulting from a contract. Theories of contract state a question of value as if it were a question of origin. Theories which apply the conceptions of organism and evolution to society as if they were as adequate in politics as in biology, while they may give a correct account of the origins of society, leave us without a criterion by which to judge of the goodness or badness of any social condition. The only logically available criterion would be the ultimate success of any given society in the struggle for existence. In practical politics we cannot wait for that: we are safer with the Utilitarian method. But why? Just because it brings in a standard of *worth*, though

too narrowly conceived. It estimates goodness by the end *to* which a society tends, *i.e.*, by reference to an ideal.

We have heard much lately of the historical method in politics—so much that it is time to hear something on the other side. The historical method has done for the study of human society great services in ridding us of the 'metaphysical' fictions of a Law of Nature, State of Nature, Original Contract, Natural Rights, &c.; but those who are strongly possessed by the historical spirit are sometimes disposed to think that, when they have shown how an institution came into being, they have said all that is worth saying on the matter. It is a mistake to suppose that, because an institution now serves certain purposes, it was created for these purposes; but, when we know how an institution came into being, we have still, as practical persons, to ask ourselves: 'What purposes does it now serve?'—else we do not estimate it rightly. Because the House of Lords was not invented as a check on legislation, it does not follow that the House of Lords is not a check on legislation—for good or for evil. Because the English State never at any moment in history selected a certain religious body and gave it certain endowments and privileges, it does not follow that the phrases 'State Church,' 'Established Church' are altogether meaningless as representing the present relation of the Church to the State. And it is this present relation and not historical facts about the Church in the time of the Heptarchy or the Power of Convocation in the time of Henry VIII. which the practical politician has to take into account. He is concerned with value, not with origins. Again, when it is asked by what right an individual owns half a county, history may lead us back to the dissolution of the monasteries, the Norman conquest, the Saxon invasion, and so on, till we come to the first blue-painted barbarian who stuck a rude spade into the ground, half cleared from brushwood. But all this, however interesting, is irrelevant to the question whether the present system of land tenure can be justified or not. Existing rights may be explained by reference to the past, but can only be justified, if it is shown that they subserve social wellbeing now and are likely to do so in the future. Similarly with the whole question of endowments. 'What was' must not blind us to 'what ought to be,' though of course the inconvenience of disturbing customs and expectations, where that is unnecessary, has always to be taken into account. The practical reformer will move, as far as possible, in the line of least resistance. It is a pity when a scientific theory or the spirit of antiquarianism interferes with the removal of mischievous

abuses. But they are apt to do so, unless the philosopher is at hand to criticise the conceptions which are being used.

Lastly, let us consider the application of this distinction between questions of origin and of validity in the domain of Religion. This is an application which we cannot avoid, however much we might hesitate about trespassing upon a domain that is guarded so jealously by those professionally interested. The theory of knowledge obliges us to assume the existence of an Eternal Self-consciousness partially revealed in ourselves. This, which is the Ideal of Knowledge, of Beauty, of Goodness, is the God of Religion. It is not asserted that there is an intuitive knowledge of the existence of one God. Such an assertion is difficult to maintain in the face of what we know of the history of religions. The idea of God, as held by the religious thinkers of the highest types of religion, is of slow and late growth. The identification of a power (or powers) outside us with *our* highest ideals of knowledge, of beauty, and of goodness is not dreamt of by the primitive savage, just because he has not *our* ideals. Nor can the idea be completed till these ideals are completed, *i.e.*, the growth of the idea of God, which we may call the revelation of God, is continuous and is commensurate with human progress. The criticism of science must be allowed full weight as against the belief that religious truth was conveyed by some inexplicable means to certain individuals at a definite time, and then handed down like some treasure of silver or gold. The prejudice against Biblical Criticism and the scientific study of Religions implies that the value of a religious idea is altogether derived from the channel through which it was first conveyed to mankind—a Prophet, a Sacred Book, an infallible Church. But the value of a religious idea cannot be dependent upon an external authority of any kind, but solely on its own adequacy to express, in a manner fitted to appeal at once to the intellect and the emotions, the highest possible beliefs of the time. This is implicitly recognised by Christian apologists, when they appeal to the supreme excellence of Christian morality; but what is the value of such an appeal if the morality is itself dependent for its validity upon the authority of miraculous persons or writings? So far as Christianity is a system of spiritual doctrines and beliefs about the relation between the soul of the individual and the Divine Spirit which is ever operating in the Universe, it finds a philosophical counterpart and intellectual interpretation in Idealism; but, so far as it is represented as *necessarily* including certain statements about alleged matters of fact, Idealism can lend no support to the apologist in his controversy with historical critics.

V.—DISCUSSION.

ON FEELING AS INDIFFERENCE.

By W. E. Johnson.

In Mind No. 48, pp. 576-578, Prof. Bain wrote a short paper, in which he invited discussion on his well-known view that "under the genus Feeling should be included indifferent, as well as pleasurable and painful, states of consciousness". The general position, which he once more enforces in this paper, seems to me true and important; but the phraseology which he (in common with many other psychologists) employs is, I think, unfortunate. The writer who has explicitly drawn attention to the mischief involved is Dr. J. Ward. Perhaps the most forcible way of indicating it is to make a fictitious supposition with respect to the history of Physical Science. We may suppose that in old times physicists introduced the science in some such terms as these: Material bodies 'naturally divide themselves into three categories or primary genera;—those which have weight—those which have size—those which have shape'. We may suppose, again, that further reflection led to the observation that these three things—weight, size and shape—were often 'closely connected,' and that 'it was seldom that body operated exclusively in any one of these three modes'. And, lastly, we may suppose that in consequence of this discovery some able physicist proposed to put an end to all confusion on the matter by pointing out that 'the division must be considered to have been made according to the most prominent feature or aspect of bodies'; and that 'though we could not find any material body which was *all* weight, or *all* shape, or *all* size, yet it rarely happened that two of these aspects were so nearly equal in their prominence as to occasion any difficulty in referring a body to one or other of these three classes'. And so this able physicist, we may suppose, succeeded in supporting and maintaining the original classification. Now a case precisely similar to this has actually occurred in the science of Psychology. I have in the above simply quoted, *mutatis mutandis*, the words used by Hamilton, Prof. Bain and Mr. Sully, in their treatment of the classification of states of mind. Yet is it not as obvious that Feeling, Knowing and Action of some kind are related constituents of any and every 'state of mind' as that shape, size and weight are related modes of any and every 'material body'? As Dr. Ward says (*Encyc. Brit.*, xx. 44), "Classification seems, in fact, to be here out of place. . . . Analysis leads us to recognise three distinct and irreducible facts . . . as together, in a certain

connexion, constituting one concrete state of mind or psychosis". And this conclusion must be accepted as obvious quite independently of the particular characteristics and modes of definition of the constituents to which our analysis may lead.

In spite of this Prof. Bain still speaks, *e.g.*, as follows: "It will probably be allowed that these states [*i.e.*, certain sensations] are very often quite indifferent as regards pleasure and pain. . . . Considering their intellectual significance we might refuse to class them with pleasures and pains under the genus Feeling, and might insist on placing them in the sphere of the Intellect." But we are treating a sensation with reference to its feeling-character as certainly when we say that its feeling-degree is zero, as when we say that its feeling-degree is positive or negative. A thing possesses temperature when it is neither hot nor cold as certainly as when it is one or the other. In the above is involved a confusion between a very necessary and desirable division of the *subject-matter* of Psychology and a classification of the *states of mind*. The material sciences are conveniently divided into such branches as Geometry, Heat, Light, &c.: but this does not imply that material things may be classified as having size, temperature or colour. Similarly Psychology may well treat of Feeling, Knowing and Willing to a great extent separately, but 'states of mind' cannot be classified into Feelings, Cognitions and Volitions.

Then again Prof. Bain says: "I must make an important admission as to the frequently mixed character of states of excitement". This is very much as if a musician, who was maintaining against an unmusical opponent that differences of timbre as well as differences of pitch existed in musical notes, should begin by the 'important admission' that timbre and pitch were often *mixed* in the same note. Such an admission would be no admission at all. Yet after all, my objection is only directed to the phraseology employed. For Prof. Bain almost exactly hits the point when he goes on to say: "Is the degree of conscious pleasure or pain necessarily and always equal to the degree of the excitement?" The musician would attempt to prove his point by producing from *different* instruments two notes of the *same* pitch, and so appeal to the auditory consciousness of his opponent. So in the case before us. Can we produce instances of states of mind which may be considered as equally pleasurable or painful, but which have a different degree of excitement? Prof. Bain's instances seem to determine this point in the affirmative. Or consider, for instance, the excitement of *anticipation* experienced while awaiting the result, *e.g.*, of some election or examination-list, in the issue of which we are strongly interested. The measure of the excitement is no measure of the pleasurableness or painfulness of the state of anticipation. For we should often readily admit that we were highly excited when we could hardly even determine whether our feeling was pleasurable or painful.

These statements are hardly likely to be contradicted. But they do not touch the point whether or not differences in degree of excitement should be regarded as variations in *Feeling*. The question is this: Is Feeling a function of one variable—a linear continuum; or a function of two variables—a superficial continuum? Are pleasure and pain so entirely *sui generis* that we ought to place them in a class by themselves called Feeling? In order to avoid the appearance of a mere dispute about words, let me put the question as follows:—Can we properly give to the term Feeling such a definition that, while pleasure and pain are excluded from its connotation, everything *except* pleasure and pain is excluded from its denotation?

In distinguishing Feeling from other constituents of mind, attention is generally drawn to three main characteristics: (1) Subjectivity, (2) Passivity, (3) Relation to Will. I will consider each of these in order.

(1) Pleasure and Pain have generally been regarded as, in a peculiar sense, *subjective*. Of course in this connexion the word *subjective* requires further analysis. We find it urged, then, that (*a*) pleasure and pain do not enter as constituents into our ideas of *material things*; (*b*) they do not enter into relations of *association* with presentations; (*c*) they attach to the *subject*—or to relations of interaction amongst a *mass* of presentations—rather than to separate *elements* in presentation. Now it would seem that Excitement also possesses these three characteristics—perhaps even more indubitably than Pleasure and Pain. The relations of Pleasure and Pain to Excitement are apparently somewhat analogous to the relations of colours to the neutral colour—white. For very intense (so called *mental*) Pleasure or Pain tends to lose its specific character and to become indistinguishable from a state of neutral Excitement. So, again, we may speak of perfectly 'saturated' conditions of Pleasure or Pain, which are as free as possible from all excitement: *e.g.*, the pleasure of going to sleep, and the pain of despair. We might even venture to urge that Pleasure and Pain are in a sense *complementary*: for when a source of pleasure and a source of pain act upon us with about equal intensity, we often have a condition approaching as nearly as possible to a state of neutral excitement. We may observe this in the exercise of sympathetic pity and (perhaps more clearly) in rage, where hatred is mingled with the sense of power. Such combinations of pleasure and pain are not algebraic compounds of + and −, giving mere zero. It should be added, however, that this mode of fusion only takes place when the pleasure and pain (of course felt by the same person) are directed towards the same object. The pleasure of music and the pain of toothache would not fuse; but would lie together in consciousness, while attention might be alternately directed to the two sources of feeling. This difference is obviously analogous to that between the fusion of colours on the same retinal points and their non-fusion on different retinal points.

(2) But Pleasure and Pain are not only subjective, they are also said to be *passive* states: in this they differ from Attention, which is active. That Excitement is intimately connected—both causally and consequentially—with attention, there can be no doubt. But the same may be said of Pleasure and Pain. If pleasure is the accompaniment (effect) of the "effective exercise of attention" (see Dr. Ward's article in *Encyc. Brit.*, xx. 71) and pain of the "ineffective exercise of attention," excitement of a high degree seems often to be the accompaniment (cause or effect) of a rapid *alternation* of attention, which is such as not to produce either much pain or much pleasure. In as far as such states of excitement are *dependent* on a phase of attention—but surely *distinguishable* from attention—they seem to be purely passive phases on a level with pleasure and pain. But in as far as states of excitement seem to *determine* changes of attention, they still fulfil *one* of the functions of pleasure and pain.

(3) This leads us to the *relation* of Feeling to *action*. Pleasure and Pain are regarded by a school of psychologists as the sole determinants of all that may be called *psychical* action. But Excitement may also determine many actions which would not usually be regarded as irrational, though verging more or less on the irrational. Such excitement is often colourless as regards pleasure and pain, while, again, the action is pursued independently of pleasures or pains to be gained or averted. Hence, still maintaining that psychical action is always determined by Feeling, we ought under variations of Feeling to include differences in degree of Excitement as well as of Pleasure and Pain.

Whether, then, we consider the subjectivity of Feeling, or its dependence on presentation and on attention, or its influence on action, we are led to the conclusion that Feeling is a constituent of consciousness varying not only in the positive and negative direction, *viz.*, as more or less Pleasure or Pain, but also in a direction, not wholly independent of the other, *viz.*, as more or less of Excitement.

MILL'S NATURAL KINDS.

By F. and C. L. Franklin, *Baltimore, U.S.A.*

The doctrine of Kinds, as laid down by Mill, does not seem to be tenable; but although there be no such radical and ineffaceable distinction in favour of certain classes as is conveyed by the word Kind, and by Mill's explanation of it, yet there is, we think, a real difference between such classes and mere arbitrary classes; and the nature of that difference may be stated very nearly as Mill stated it. In point of fact there are, for all purposes of practice, classes which possess that salient peculiarity upon which Mill

lays chief stress in characterising Natural Kinds, *viz.*, that the possession of a few qualities ensures the possession of others which do not follow logically, nor, as far as we know, physically, from the first. It is not merely that in regard to a horse, or a bit of sulphur, "many general assertions are possible," as Mr. Towry (see MIND No. 47, pp. 434 ff.) says; but that a few assertions are sufficient to mark off the class of which these many assertions are true; while in regard to classes defined by an arbitrary choice of qualities, no general assertions are possible except those which follow from the definition. Yet, says Mr. Towry, "the one class is no whit less a merely intellectual creation than the other". That it is an intellectual creation, and not a group absolutely insulated in nature by impassable chasms, we admit; but that it is a *merely* intellectual creation, in the sense in which an arbitrary class is such, seems impossible.

The true view of the case seems to us to flow from the general doctrine of Causation. When one event invariably accompanies another event, we consider them to be connected through causation; *i.e.*, either as cause and effect or as effects of a common cause. In like manner, if all objects which possess the attributes *a* and *b* are found in nature to possess a number of other attributes in common, we cannot believe that this is a mere coincidence; we are forced to conclude either that the given attributes are accompanied by the others in virtue of a general law of causation, or that the objects have a certain community of origin.

Thus it seems to us that the fault in Mill's discussion was not that he made a distinction where none exists, but that he regarded the distinction as an ultimate fact, instead of a thing to be explained. The very terms, however, in which he drew the distinction point to the mode in which it may be explained; though, on the other hand, it must be admitted that the explanation, while it explains the chief distinction, explains away much that Mill laid down concerning it. When a certain set of qualities entails the presence of others, and the supposition cannot be entertained that there is a causal connexion of a general nature between them, the conclusion is inevitable, as we have said, that there is *a certain community of origin* among the objects possessing that set of qualities. The phrase in italics is designedly vague; for we never refer things to an absolute origin. Accordingly, the classes which are in some sense entitled to the name of Kinds, inasmuch as the objects composing them are really connected in nature by so genuine a bond as that of community of origin, are nevertheless loosely defined, and may narrow or widen, or be lost entirely, according to the direction and extent of the lines along which their origin may be imagined to be traced. While, however, this does away with the mysterious and impassable chasm between Natural Kinds, it does not seriously impair that other character—perhaps too strongly insisted upon by Mill—of the indefiniteness of the number of

common attributes; for, if we regard the invariable concomitance of certain qualities with certain other marks as proof of a common origin in the objects possessing those marks, there is no reason for setting any limit to the number of ways in which that common origin will be betrayed.

It is not meant to be implied in the foregoing, that in the case of all "Natural Kinds" community of origin has been the actual ground of classification, or even a subsequently found character. To take what seems, in some respects, the simplest possible instance, the chemical elements, there is not, within the present writers' knowledge, any external evidence that all the sodium, for example, in the universe was derived from a common stock; but it seems highly probable that either this is the case or else that all the properties of sodium are deducible by general laws from a few of them. In other words, the fact that all portions of matter which possess a few of the properties of sodium do actually possess all the other properties of sodium forces upon us the conviction that either the qualities or the objects have a real connexion with each other. If the former is the case, the properties of sodium are deductions from its molecular constitution; if the latter, then sodium is in a very valid sense a Natural Kind—something very different from an arbitrary and "merely intellectual" class: and this, whether one agrees or does not agree with the present writers in regarding the connexion between the objects to reside in a certain community of origin. In the case of the animals forming a species, it would be preposterous to suppose that all the common qualities might be explained deductively from a few of them. These, then, form a Natural Kind, in the sense in which we have used the term; and, in this case, community of origin has been sufficiently shown to be the true ground of the classification. It is a matter of course that such classes are not more but less rigidly marked off than arbitrary classes. The quality of "naturalness" is attributed to them, not in virtue of their boundaries being clearly marked out by nature, but because, however indistinct the actual boundary may turn out to be, the principle on which it is drawn points to a natural and not a merely intellectual connexion among the objects it includes.

THE AIM OF INDUCTIVE REASONING.

By Joseph Solomon.

Inductive Logic seems to me to be in a state of some confusion at the present time. There is not perhaps much to be added in the way of statement or elucidation to the general description of the processes by which natural truths, other than mere facts of observation, are attained to; but there seems still to be much

indistinctness in the logician's conceptions of the nature of the truths the men of science aim at discovering. The current description is that science aims at the discovery of Causes. Why I consider this description unsatisfactory, and what I desire to replace it by, I will shortly endeavour to show.

Cause is commonly understood to be prior to effect; the popular name of a well-known fallacy ('*Post hoc, ergo propter hoc*') reminds us of our common tendency to treat the earlier of two incidents affecting the same material as the cause of the later. Recent discussion of this assumed priority of cause to effect has elicited many true ideas, but has also tended to produce some degree of mental unsettlement. It is allowed we can constantly point to incidents without which later incidents would not have occurred; but we are reminded that much else also has to occur before the later incident is matured, that the striking earlier incident which we called the 'cause' is but a co-operating factor towards the evolution of the effect and would be better described as a 'condition,' to which other conditions must add themselves. But when all these conditions are once simultaneously realised, is not the result also realised coincidently with them? So that it would seem that the only true 'cause,' the 'assemblage of conditions,' was not prior to the effect but contemporaneous with it: and indeed, once this idea is broached, it seems to fall in with, and be a necessary corollary to, our idea of Cause; for how can a cause which does not produce its effect be called the cause of that effect at all? But if again the idea in question be adopted, what becomes of the current conception that a cause is prior to its effect, or of the scholastic transmutation of this, that the relation of cause and effect is nothing but a relation of invariable antecedence and sequence?

The drift of the above remarks is that it would seem more correct to describe science as the ascertainment of invariable *coincidences* than as the ascertainment of invariable sequences. But before saying more to justify this point of view, I wish to call attention to a class of discovered scientific truths which it seems still more difficult to range under the head of invariable sequences or even to describe as laws of causation at all.

When we say that the detached apple falls to the ground because the earth attracts it or that the heavenly bodies pursue their orbits because they attract one another, no one doubts that we here state a most profound and important discovery of the human intellect; vulgarly it is even supposed that we have attained in this case pre-eminently to the discovery of a cause, of an efficient cause, that actually brings about its own result (like the prophecies of Curran's criminal, who himself took in hand their execution) and is not merely followed by it (like the prophecies of other men). Science, however, deprecates any such conception as anthropomorphic or worse than anthropomorphic, as intending to attribute to the sun or earth the action of a man

and in effect attributing to them something quite impossible to man, namely, mechanical action at a distance. We have then to say that, in assigning the attraction of the earth as the cause of the fall of the apple, we are not merely restating the phenomenon itself, but giving in our restatement a general view of it, a view of it applicable to a vast variety of phenomena superficially quite dissimilar to it, to which it is thus for the first time, and most usefully, assimilated. We have found a Law of Nature, the attraction of all bodies to one another, but a law of which the phenomena in question are not effects but exemplifications. I want now to ask, Would it not be best to say that all discoveries of this class are discoveries of Laws of Nature, the character of which is, that they are endlessly and in endless forms exemplified in incidents?

Thus the functions of scientific discovery appear to be (1) pre-eminently *generalisation*, by which I understand the grouping of one sort of phenomenon with phenomena of (apparently) other sorts by the hypothetical or experimental detection of a common principle in them; (2) the ascertaining of invariable *coincidences*, *e.g.*, the occurrence of the electric spark, of explosion, &c., upon the assemblage of certain conditions. I say 'pre-eminently *generalisation*,' because the idea of generalisation must be the guide and inspirer even of efforts at discovery made in direction (2). And of course by generalisation I mean (as in fact I have already tried to state) something more than the bare assertion that what has happened now will always happen. It is matter of course, it is the postulate of all study of nature whatever, that what has happened now will always happen; whether the date be 1887 or 2887, what does that matter? No doubt, our experience often misleads us; no doubt, our memoranda of the past often lead us to expect something that does not happen: but that can only be from inaccuracy or incompleteness in those memoranda. We think we have reported accurately, we think we have reported fully what has happened, and we have not done so. If nature is uniform, if nature can be studied, then one instance is as good a proof as a thousand of the detailed phenomenon exhibited in that instance; and if we endeavour precisely to repeat the instance—as men of science constantly (one sometimes thinks needlessly) do—it is because of their diffidence as to the accuracy of their own narrative of what has occurred, especially when the matter to be observed is minute, subtle and easily misread. Therefore even in seeking new coincidences the student of nature always does so with the hope of establishing something wider and more general than the mere phenomenon he has observed or produced, even though that be in itself startling and unexpected. He seeks, we say, to discover its 'cause'; in fact he is trying to discover some wider coincidence, one less burdened with detail, of which the one before him may be regarded as an example, but of which there may be other examples lying perhaps in fields apparently widely separated from the present one.

It thus appears that if—as we, no doubt, commonly say—it is the function of inductive reasoning to discover 'causes,' the word 'cause' is here used in a sense widely different from the common one, even when that common one is refined and subtilised by being explained as 'assemblage of conditions'. There can be no doubt it is the function of science both to discover 'causes'—in the sense in which we have last used the word—and to discover 'assemblages of conditions' under which some new state or phenomenon is realised. I would suggest that the word 'cause' be used for neither of these objects of scientific discovery. The first kind of 'cause' we might call 'reason' or 'principle,' and say it is one function of science to discover the 'reasons' or 'principles' of phenomena: for the second kind of 'cause' we might keep the name 'assemblage of conditions,' and say that it is another function of science to discover such 'assemblages of conditions,' or—to use language previously employed—to discover natural or invariable 'coincidences'.

I have no such foolish wish as the desire to banish the word 'cause' from language altogether, though others have entertained that aspiration. My point is, that it is a word not for scientific but for practical use. The popular instinct seems to me most right in clinging to the idea that the cause is prior to the effect, most right in resisting, as bewildering and unsettling, the logician's theory that cause, when fully scrutinised, is coincident and contemporaneous with effect. For practical purposes the time-element is everything. We do not desire to state scientific 'coincidences'; we do not desire to state with scientific precision what *must* happen under certain circumstances. We desire to infer the future from the present—in particular to infer our own individual future from our present circumstances, and especially from our present actions. It is not less serviceable to point out that a certain explosion was 'caused' by a servant entering a gas-laden room with a candle; though science on the one hand would not stoop to particularise such a detail as the candle but would speak generally of 'flame,' and on the other hand would seek to register with a precision we do not aim at the whole set of circumstances with which an explosion is necessarily coincident, or to which it is necessarily annexed. We may serviceably warn a child against over-eating to-day because such over-eating will 'cause' indigestion to-morrow, without any theory as to the kind of physical distress of which indigestion is an expression, and without any kind of theory as to the connexion between such distress and overloading the stomach. Therefore, to us in the practical management of our lives, knowledge of 'causes,' in the old popular sense of 'cause,' is most important, and we may fairly, because serviceably, speak of that which was done in the morning as the 'cause' of that which happened in the evening. The man of science should not. What we call the 'cause' of the later incident is to him at once too full and not full enough: not full enough, because he

knows what a string of later circumstances and states must be added before the effect is realised—a string not complete till the effect is realised; too full, because to the man of science with his desire for the broadest, most general, most widely-applicable modes of expression, our minute recital is needlessly and unbearably involved in detail.

The conclusion is—let us keep the word 'Cause' for the use of practical, every-day life, and let the function of inductive science be described as has been suggested above.

ETHICS AND THE IDEAL.

By Rev. W. L. Davidson.

Ethics, taken in its proper signification, includes two things. On the one hand, it consists of an investigation into the nature and constitution of human character; and, on the other hand, it is concerned with the formulating and enunciating of rules for human conduct. In the first case, it is theoretical ethics; in the second, practical. The practical is necessarily dependent on the theoretical; for, in order to be a sure and trustworthy guide to conduct, ere ever it can lawfully claim the authority of a counsellor and help to man, Ethics must repose on a well-considered analysis and investigation of man's mental and moral nature, as well as of his social conditions. It is, therefore, in the closest manner allied with psychology and with sociology; and the methods of these two sciences are precisely those that stand us in good stead here.

As compared with allied sciences, however, Ethics has a complication peculiar to itself. It deals essentially with the 'ought' as distinguished from the 'is'; it is the science of human character and human conduct *as they should be*, and not simply as we actually find them. Nevertheless, as the ideal, in order to be of any true value, must be founded on the real, the starting-point for all ethical speculation must be human nature as it falls actually within our ken. We must analyse and study the 'is' before we can safely proceed to the 'ought to be'; and, however far forward our ideality may carry us, it must both begin from and return again to actual experience. The word 'ideality,' however, is here somewhat ambiguous. It may refer simply to an idea present in the mind, and not embodied in actuality; or it may signify a highest or best conceivable state of things, partly indeed realised but the full realisation of which is still future. It is in the second sense that the word is here employed; and, though this sense includes the other, it goes considerably beyond it. An ideal is also an idea, though an idea need not by any means be an ideal.

The full definition of the science, therefore, will be: Ethics—the science of human character and human conduct *as they ought to be*, founded on the knowledge of what human character and human conduct *have been* and *are*. Or, in order to bring out the ideality more clearly: Ethics—the science of the ideal, with a view to conduct.

Now, objection to a science of the ideal may be taken on two different grounds; and, as each meets us in philosophy sanctioned by great names, it may be well to consider both for a moment. It may be objected that there cannot be a science of the ideal because there is no valid distinction between the ideal and the real; or it may be objected that there cannot be a science of the ideal because, although there is a valid distinction between the ideal and the real, the ideal is unknown and therefore undefinable.

(1) The first of these objections is Ferrier's. In a note in the second volume of the *Remains*, he puts it very pointedly thus:

"Sir James Mackintosh and others have attempted to establish a distinction between 'mental' and 'moral' science, founded on an alleged difference between fact and duty. They state, it is the office of the former science to teach us *what is* (quid est), and that it is the office of the latter to teach us *what ought to be* (quid oportet). But this discrimination vanishes into nought upon the slightest reflection; it either incessantly confounds and obliterates itself, or else it renders moral science an unreal and nugatory pursuit. For, let us ask, does the *quid oportet* ever become the *quid est?* does *what ought to be* ever pass into *what is*, or, in other words, is duty ever realised as fact? If it is, then the distinction is at an end. The *oportet* has taken upon itself the character of the *est*. Duty, in becoming practical, has become a fact. It no longer merely points out something which *ought to be*, it also embodies something which *is*. And thus it is transformed into the very other member of the discrimination from which it was originally contradistinguished; and thus the distinction is rendered utterly void; while 'mental' and 'moral' science, if one must affix these epithets to philosophy, lapse into one. On the other hand, does the *quid oportet* never, in any degree, become the *quid est*, does duty never pass into fact? Then is the science of morals a visionary, a baseless and an aimless science, a mere querulous hankering after what can never be. In this case, there is plainly no real or substantial science, except the science of facts, the science which teaches us the *quid est*. To talk now of a science of the *quid oportet*, would be to make use of unmeaning words."

To this it may be answered: (*a*) That there are a great many mental phenomena that bear no *moral* implications whatever; they are simply facts of consciousness, and therefore may very well be separated from those other facts of consciousness that *do* have a moral implication. Thus, on tasting sugar, I experience the pleasant sensation of sweetness. This sensation is a simple psychical fact without ethical significance; and there is no sense in classing it along with compunction or remorse, in which the ethical significance is everything. (*b*) We may very well grant that, to a certain extent, the 'is' and the 'ought' are identical,

and yet not be driven to Ferrier's conclusion. For, unquestionably, there is much in human character and human conduct that 'is' as it 'ought to be'. But the peculiarity of the case is, that, even when the two are identified, the 'is' will not let us rest in itself but urges us on to the conception of the 'ought,' and forces us (as it were) to give the fact an *ethical* interpretation. (*c*) Human character and human conduct, as actual fact, have much in them that *ought not* to be. They fall short of an ideal standard, and are thereby differentiated from contiguous or allied phenomena. (*d*) We know, because we have seen it — it is determined by a wide induction of particulars—that the ethical ideal does influence mankind; and when we ask the reason how it comes to influence mankind, we find that reason to be, because it is adapted to man's better nature and higher aspirations and because it is believed to be ultimately realisable by him. And the ground of this belief in its ultimate realisation is an unquestioned fact of experience—*viz.*, that man has power, within limits, of working out his ideals—of working towards them or of bringing them to pass. Although conditioned by his environment, he can, so far, change or transform his environment—he has a certain ability of moulding or bending circumstances to his will; and this ability is what renders Ethics possible, and answers objections against its ideality.

Put shortly, then, Ferrier's fallacy lies in an equivocal use of the word 'reality' or 'fact'. A thing actually experienced is a fact, and a thing merely anticipated may be denominated a fact also. But the second is not a fact in the same sense of the word as the first is, although it may by-and-by become an actuality in that sense of the term too. So the 'is' and the 'ought' may both be designated facts; but while ideality is of the essence of the latter, it does not necessarily enter into the former. The 'ought' appeals to man's endeavours and aspirations; the 'is' has reference to his acquisitions and attainments.

(2) The second objection takes a somewhat different form. 'Granted,' it may be said, 'that the ideal of Ethics has existence; still Ethics cannot be a science, because this ideal cannot be defined.' And if we ask, further, why this ideal cannot be defined, we receive for answer, 'Because it is only in process of realisation'.

Now is this a valid objection? I think not. For, obviously, it overlooks the fact that Ethics rests on a basis of experience, and that it is quite possible to gauge *tendencies* and to interpret them correctly. Shall a knowledge of the hyperbola be denied us because the asymptote is ever approaching that curve but never reaches it? On the contrary, the very circumstance that you can lay down the doctrine of the asymptote proves you to have a knowledge of the hyperbola; and the very circumstance that there is such a thing as *improvement* in human character implies that you have a knowledge of that something in whose direction the improvement takes place. Indeed, the very word 'ideal'

has no meaning unless on the supposition of a higher and lower, a better and worse; and from higher we pass to highest and from better to best. It is fallacious to try to shut us up between two alternatives, as though these exhausted the possibilities; and it is misleading in the extreme to make a total break between the realised as the known and the unrealised as the unknown. The unrealised is *not* the unknown, unless it be of a kind in every way different from the realised and known. It is equally the known if it proceed upon the lines of the realised; and, so long as we examine human nature and generalise upon the knowledge thence derived, we are on sure ground and may legitimately claim for our procedure the character of being scientific.

This point, amid much that is admirable, has been somewhat obscured, and needlessly so, I think, by Green in his *Prolegomena to Ethics*. Strong in the opinion that the idea of a better implies a best, he nevertheless, when treating of the formal character of the moral ideal, so emphasises the unknown character of this 'best' as almost to reduce its value to zero. Here is what he says:

> "Man can never give a sufficient account of what his unconditional good is, because he cannot know what his capabilities are till they are realised. This is the explanation of the infirmity that has always been found to attach to attempted definitions of the moral ideal. They are always open to the charge that there is employed in the definition, openly or disguisedly, the very notion which profession is made of defining."

If this were so, in all the rigour of the statement, Green's own ethical teaching would certainly not be what it is, and would not have that stimulating power which it unquestionably possesses. But this is not so in all the rigour of statement, nor does Green in other parts of his work conceive it so, for man *can* know what his capabilities are *before* they are realised; and it is precisely this knowledge that ethical introspection, examination of a man's own conduct, careful scrutiny of the conduct of others (as revealed personally to ourselves or as declared to us in history), study of social usages, institutions and the like, are competent to give. In a very real sense, the limits of man's faculties are given in a knowledge of their nature, taken in connexion with a knowledge of their environment; and we can as surely tell the end towards which righteousness is tending, and the lines on which it must work, as the astronomer can tell the future of a heavenly body, or the naturalist the character of an extinct animal from the print of its cleft foot. We have here, as Cuvier would say, "a surer mark than all those of Zadig". Dr. Martineau has put it better:

> "The possible also *is*, whether it happens or not; and its categories, of the right, the beautiful, the necessarily true, may have their contents defined and held ready for realisation, whatever centuries lapse ere they appear."

In like manner, I cannot admit the implication in what Green

says of hedonism in this connexion. He says (continuing the preceding passage) :

"It is one of the attractions of hedonistic utilitarianism that it seems to avoid this logical embarrassment. If we say that the unconditional good is pleasure, and that the good will is that which in its effects turns out to produce most pleasure on the whole, we are certainly not chargeable with assuming in either definition the idea to be defined. We are not at once explaining the unconditional good by reference to the good will, and the good will by reference to the unconditional good."

But *has* hedonistic utilitarianism here any advantage ? or does it not rather stand on precisely the same footing, in this respect, as every other theory of the moral ideal? Surely the hedonist's ideal is as much an ideal (not more so, not less so) as the ideal of any other moralist. It is in part realised, and in part unrealised ; and from the part that is realised is inferred the nature and possibility of the part that is unrealised.

The characteristic of Ethics, as science of the ideal, may be put in a very few words. It is the testimony of experience that men *do* have a conception of the 'ought' as distinct from the 'is,' and by this conception test their own character and conduct, as well as the character and conduct of others. It is, further, the testimony of experience that this conception of the 'ought' emerges when the principles of man's being—the various springs of action by which he is moved—are in conflict. Further still, it is testified by experience that there is among men the recognition of an ideal unattained, yet presumably attainable, in which the 'ought' shall rule, in which the elements and principles of man's nature shall all be harmonised, and peace and happiness shall reign within. It is these facts that give to Ethics its justification and its meaning. It is because of its ideal, proved inductively to be a reality, and with a view to stimulating towards its attainment, that Ethics has existence ; and it is in the examination, explanation and interpretation of this ideal that Ethics finds its proper function.

VI.—CRITICAL NOTICES.

The Science of Thought. By F. Max Müller. London: Longmans, Green & Co., 1887. Pp. xxiv., 664.

It is impossible not to admire the author's earnestness of purpose in this book and not to envy him (a little) his sense of achievement. The purpose is high. It is nothing less than to "place all philosophy on a new basis" (p. 514), by drawing out a science of Thought from that science of Language which his own labours have done so much to advance. Having helped more than most men in tracking out the past history of the words in use among Aryan peoples, he is convinced that, "if we fully understood the whole growth of every word, philosophy would have and could have no longer any secrets"—nay, "would cease to exist" (p. 515). The consummation is not going to be reached just at once, but at least the right path is now opened which philosophers, even the greatest, have missed before. Let the lines he here traces be followed out, and "several more generations of scholars and philosophers" should at last see an end of the business.

This is a specimen of the fine cheery confidence which Prof. Müller is able to maintain throughout the work; but yet he has also another mood. *Dixi et salvavi meam animam* is the exclamation wrung from him at thought of the degenerate age upon which he has fallen with his philosophical plea. Indeed, at starting, he declares it is only for himself and "a few friends," fellow-travellers with him for many years on the same road, that he writes at all. So, now and again, it is borne in upon him what an arduous and toilsome course that is along which he has to drag the "patient reader"—if (p. 548) perchance he has a reader! It is an odd imagination. The age is, of course, not in the least degenerate; and how could he fail to have readers as he wanders with that perfect gaiety of heart from topic to topic, putting his whole self into everything he says—and this a self so kindly that he can never meet a foe who is not straightway made to assume the guise of a friend and ally? He has written the most genial and readable of books; but, certainly, if for "reader" he had said reviewer, no pity he had to spare could be too much. The discursiveness of the work is something extraordinary, and there is toil indeed for one who will try to reckon up its sum. Nevertheless, let the trial be made.

The backbone of the book is to be found in some chapters, beginning with ch. v., from p. 179. In ch. i. the original start is made naturally enough with an analysis of Thought into its "Constituent Elements," but this runs down about p. 30 (not without considerable digression by the way); and the long re-

mainder of the chapter, occupied mainly with a general discussion of the dependence of Thought upon Language, still more the next three chapters, are intended only to clear the way for the more serious business begun in ch. v. If the preliminary matter—consisting, beyond what has been already mentioned, of an argument for the impossibility of supposing the Language of Thought in man to be related to or evolved from the inarticulate cries of the lower animals—runs to the length of 178 pp., the reason is not least because the author has so much personal reminiscence of past dealings with the subjects to give way to. To be sure, there is included in this introductory part of the work a chapter "On Kant's Philosophy" (pp. 127-51); but neither is this without relation to past achievement. At last fairly under weigh from ch. v., Prof. Müller furnishes the complement to his initial view of the constituent elements of Thought in an analysis of Language—at least Aryan language—down to roots, which for the most part prove to be of conceptual import. Ch. vi. (pp. 256-330) is then devoted to a theory of the origin of Concepts and Roots together, which he has been led to form with the help—if not under the lead—of his friend Prof. Noiré of Mainz. Next follows a long chapter in which an examination (after the old Indian grammarians) of Sanskrit roots is found to confirm the theory that it was in putting forth repeated actions together that men first *spoke* with mutual intelligence; yielding as final result a scheme of conscious human activities that may be taken to represent the *idées mères* of the Aryan race, or at least of the Indian people. All that then seems to Prof. Müller strictly necessary for the fulfilment of his purpose of placing philosophy upon the new basis is supplied in one other chapter on the "Formation of Words" (pp. 420-518); in which he shows how roots became transformed by the "application of categories," works out (in controversy chiefly with Mill) what he considers a true scheme of Logical Terms, and enlarges on the function of Metaphor in the development of speech. A farther chapter on "Propositions and Syllogisms," thrown in as a superfluity, is in fact no serious makeweight; and the long "Conclusion" (pp. 548-618) neither adds anything new to the argument of the book nor even serves to bring threads together, but simply discourses farther on-and-on or about-and-about.

A "Science of Thought" of which these are the stages is pretty evidently the work of one who is above all a scholar, and the book may more fairly be regarded and judged as the author's latest product in Linguistic than as an essay in Philosophy. That, of course, is not at all his own opinion; for not only is the book expressly given out as a philosophical theory of Reason, but there is promise of its being followed by a crowning philosophical effort, in which, under the name of "Science of Mythology," the fact of self-consciousness, now simply assumed, will have its full mystery probed, and the relation of the Many to the One—the

fundamental question of all philosophy—will be determined. Nor, certainly, is it now for the first time that our author's interest in philosophy becomes known. A few years ago, it will be remembered, he carried through no less serious a labour than the translation of Kant's chief work (see MIND vii. 277); and, already some twenty years earlier, the old *Lectures on the Science of Language* showed him alive to questions for which the common linguistic inquirer has little care. Indeed, when he now contends for a far more intimate relation of Thought and Language than he finds to be asserted by the majority of philosophers, he but develops an argument conducted on similar lines in the second series of *Lectures* (1864). Nevertheless, and in spite of the ambitious purpose now proclaimed, it may appear, upon a short review of his main deliverances (taken as far as possible in order), that the strenuous worker at Science of Language still advances but a little way beyond his old position of philosophical amateur.

The analysis of Thought proposed in ch. i. (pp. 1-76) fails chiefly in not being carried far enough. Prof. Müller has learned from Kant the great lesson that, while sensations come into consciousness only as percepts, percepts have definiteness only as they are conceptually understood; but the "constituents" of Thought would seem to need a good deal more particular determination for a "science" of it. Though Concepts have Names in a special relation with them, this is no sufficient reason why the fact should no sooner be noted than all farther analysis is forgotten, throughout the body of the chapter, in the ardour of proving conception impossible without speech,—until, towards the end, some crude metaphysical explanation of Thought is supplementarily hazarded in terms of "impacts" received by a "self-conscious Monon" from "other Mona". Ch. ii., with "Thought and Language" for its declared subject, might have seemed the natural place for the proof foisted into ch. i., instead of being itself allowed to turn into something not at all indicated in the title—an argument against Darwinism. But, given the author his way, with all its sudden breaks and turnings, his constituents of thought, as far as made out, call for at least one remark. However involved with concepts, surely it is not rightly said, as at p. 2 and more expressly at p. 20, that names are a fourth element of knowledge, related to concepts as concepts to percepts and percepts to sensations. On the one hand, this declaration appears to give to the concept an (at least relative) independence that can hardly be intended by so absolute a nominalist; on the other, it appears to give to the name the same subjective character as belongs to the other elements, thereby robbing it of all its psychological efficacy. Generally throughout ch. i. (as elsewhere), it must be added, the author has a way of playing fast and loose with psychological terms that does not bode well for the "Science" he would create.

The argument for the inseparability of Thought and Language,

in which the analysis of thought so soon becomes lost, is urged partly in the form of a more extended criticism of the dicta of philosophers on the subject than the author had given in the old *Lectures*, partly in the form of express reply to objections made against the plea he had there urged. He nowhere appears to better advantage in the present book than when so replying. The objections that have ever been made against the position that, in as far as thought is general (and thought is essentially general), it has being in and through some kind of particular expression, overt or covert, betray a deficiency of psychological insight, and are very effectively met here. Less satisfactory is the author's criticism on the philosophers. It is a kind of criticism that could be made of value only by being rendered at once more orderly and more extensive. And when in certain thinkers, even of nominalist faith, there is noted some failure to recognise, or at least declare, the thoroughgoing implication of speech with thought, it does not appear to have been sufficiently considered whether such declaration, or even recognition, was not beside their philosophical purpose for the time being. The fact that Kant in particular says nothing (except, as has to be confessed, in his *Anthropologie*) about speech, and yet accomplishes a philosophical analysis of thought, the mere fringe of which (as detached in ch. iii.) is ample covering for the author all through his own undertaking, might have suggested to him serious doubt whether the psychological involution of speaking with thinking—never to be exaggerated in its closeness—has all the philosophical importance here claimed for it.

The other preliminary contention, begun unexpectedly in ch. ii., is, after the interpolated view of Kant's philosophy in ch. iii., resumed in ch. iv. under the imposing title of "Language the Barrier between Man and Beast". Prof. Müller is of opinion that he cannot safely pass to the study of human speech as it is expressive of thought unless he first proves that language in man has nothing in common with the cry of the brute; and this, he imagines, can be done only by the overthrow of Darwin's doctrine of the descent of man from non-human ancestors. Not that, in his own view, man is not also animal, subject to all the conditions (properly understood) of evolution. He has no doubt that there was a time when man, approximately in present form, did not yet speak, as there was a still earlier time during which an indefinite series of previous stages were being passed through before the recognised human form was reached; still, in whatever lower guise and while not yet speaking, the man-to-be was the only animal destined to speak (and think). And as no animal off the particular line of human development—descended, that is, from any other primitive germ than the one appointed to grow into speaking man—can ever become man, so it is vain, with Darwin and others, to look for the origin or explanation of speech in any sounds that brutes can utter. Such, as well as can be gathered

from a discourse that more than rambles and that bristles in detail with points of questionable statement (here perforce left aside), is the heart of his contention. The obvious reflection upon it, as it stands, is that it appears to remain beset with all the difficulties it aims at avoiding. If 'man' not yet speaking, in whatever earlier form, was to all intents and purposes, or at any rate in effect, an animal like others, then at least one kind of animal could acquire the speech it had not, and its speech when acquired cannot be supposed unrelated to whatever simpler means of expression it had before it could speak. Doubtless, human speech is the outcome of no animal sounds (in apes or other creatures) of which we have present experience, so that, but in the way of illustration of that which went before speech (proper) in evolving man, such sounds are not to be drawn into account; but, if it must have had an origin which, though other, was still animal, then to talk of "barrier between man and beast" is mere rhetoric. Or, if the stress of the contention is meant to lie in a difference between feeling which brute cries express and thought which can only be spoken, this makes thought the true barrier; but the question then arises whether thought is so far removed from any kind of animal apprehension that it must have one particular line of organic evolution appointed for it from the first; and, even if this could be proved, the difficulty recurs that the line is after all a line of animals, thoughtless like any other till thought starts out at last within it. We shall see, too, before long that the author is by no means so sure that there was nothing that could be called speech in man before man thought-in-speech; forgetting, apparently, how fixed and fast was the "barrier" he had sought to raise for behoof of human reason. But what has rather to be said of the long argumentation with Darwin or the Darwinians is that it appears to be so much waste, thrust in where it is here. Let it be granted that it is only as man thinks that he (properly) speaks and that in man himself, as in "the beast," vocal expression of mere feeling is not speech proper. It is an important question, for anthropologist or psychologist, when and how men came so to think-and-speak,—unless we suppose (as the author emphatically does not) that they thought-and-spoke always; but its settlement need in no way interfere with any conclusions to be drawn as to the constitution of man's thought from his actual speech. If such a "Science of Thought" was the author's real aim, one does not see what occasion there was for him to take all that trouble about his "rear" (p. 180). Less haste to be done with the analysis of Thought undertaken at the beginning would seem to have been more to the purpose. Be that as it may, however, let us now follow him as, with mind relieved from all backward fear he, in ch. v., buckles to—or resumes—his appointed task.

"The Constituent Elements of Language," which it here becomes his first business to discover, are not made out in any systematic

fashion. Some representative specimens of Roots are obtained by comparison of other Aryan tongues with Sanskrit, which displays the common radical elements with greatest evidence: for the rest, he is content to fight over again, in episodic fashion, the old battle with 'bow-wow'-ists and 'pooh-pooh'-ists. But, towards the end of the chapter, he passes into a line of exposition (or remark) that has more significance, in respect at least of the admissions it involves. (1) He had formerly supposed that simpler roots are the more primitive, but is now convinced that "to postulate in the beginning simple roots with the most general meanings as previous to complex roots with more special meanings would be the same mistake in linguistic history as in natural history to claim for the genus a priority before the species, or for the species before the individual" (p. 220). Without pausing to remark upon the force or aptness of his simile (more especially as coming from one who argues about "species" as he does in ch. ii.), there is here a remarkable approach by an adherent of the school of Bopp to the position of later inquirers who do not find that the problem of language is to be solved in accordance with any single principle of logical development. (2) An equally or still more remarkable allowance appears in the declaration that, while two classes of roots are to be signalised, *predicative* and *demonstrative*, the demonstrative "in their primitive form and intention are addressed to the senses rather than the intellect" (p. 221); and that, though it would simplify the problem of language to suppose, with Bopp and his school, that all roots are conceptual, we may, in the demonstrative elements, be having to do with "remnants of an earlier stage, if not of language, yet of communication" (p. 222)—"of the earliest and almost pantomimic phase of language in which language was hardly as yet what we mean by language, namely *logos*, a gathering, but only a pointing" (p. 241). The allowance could not be more frankly made, and one misses only some recognition, here or anywhere, of its bearing upon the contention, so vehemently urged, for the eternal "barrier" between man and brute. If human language had to pass through such an earlier phase—whether then to be called "language" (as we now understand this) or not—there does not seem to be much left in the way of barrier. At the same time, one may suggest a doubt whether Prof. Müller does not suffer his candour to carry him too far in the way of allowance. For supposing "language" were at first "a pointing" merely, would it therefore be devoid of all conceptual import, as he seems here to imply? Surely, it might still be—nay, is to be—maintained that, since even the spoken word is "addressed to the senses" and could not otherwise do its intellectual work, the earlier and ruder pantomimic gesture already had a properly intellectual character. Farewell, else, to all possibility of establishing the indefeasible relation between Language and Thought. (3) Our author, finally, is quite willing

(p. 245) to go all lengths with those who maintain—as, he reminds them, already Aristotle saw—that the unit of language is the sentence rather than the word, or, if word, such word as is nothing less than sentence; having no difficulty in supposing that the bare root (prior to the formed word) should have had from the first all the force and significance of a sentence, imperative or other. This is very well; but then it might have occurred to him, in proceeding next to study the "Origin of Concepts and Roots" together in ch. vi., that the initial analysis of Thought never got beyond the point of eliciting the "Concept" in that most special sense in which it is related to the fully developed "Name". The perfunctory character of the work done at that all-important stage becomes more and more apparent.

In point of fact, "Concept" does now, when it has to be connected with "Root" instead of "Name," have its import tacitly widened by Prof. Müller; though, in beginning ch. vi. with an historical excursus on the views of English philosophers from Locke onwards as to the abstract (general) idea, he is still concerned with this in its more definite sense, as related to the "Name". The excursus must not detain us, but let it be said in passing that it exhibits a looseness of statement only too characteristic of the author's historical references throughout. For example, though making always a great deal of Berkeley—"dear Bishop Berkeley" as at last (p. 617) he fondly calls him—he is here (pp. 259 ff.) so little careful to note the exact point of the bishop's doctrine, which puts no stress upon the "name" in explaining the "abstract idea" (so far as Berkeley will allow of this at all), that he is found quoting as if from Berkeley himself well-known phrases of Hume's that quite misrepresent it.[1] Coming to the heart of the chapter, we have a sympathetic, even enthusiastic, exposition of Noiré's theory of the origin of roots, prefaced by or including a lengthy statement of that writer's general philosophical method and conclusions. So far as this second digression is again historical, Prof. Müller might well have spared it to his readers, having before overladen his translation of Kant's *Kritik* with such a dead-weight of 'Introduction' in that kind from his friend; nor can gratitude be professed for the metaphysical part of it, so little helpful to the business in hand. It is more to the point when he goes on to tell how Noiré himself held a view of the origin of speech allied to that of Darwin and the common evolutionist school, before, in 1877, he committed himself in his *Ursprung der Sprache* to the definite position that men's first articulate utterances emerged on occasion of their putting forth

[1] The true gist of Berkeley's doctrine, which (probably owing to Hume's misrepresentation in *Treatise of Human Nature*, i. 1, § 5) has too often been missed, was noted in MIND iii. 386, on occasion of Dr. A. Meinong's admirable statement of it in his *Hume-Studien* i.

some conscious activity in common. The fact that the action (as of grinding, weaving or what not) was a repeated one lent to the utterance a conceptual character, inasmuch as the utterance was a means of giving unity to a multiplicity; and the fact of its emerging, under common conditions of organisation, from a number of throats together, made it at once significant for purposes of intercommunication. Our author had himself been so far on the way to some such view as this that he was prepared to accept it as soon as formulated by Noiré, subject to its proving comprehensive enough to cover all the facts. In particular, he had a difficulty in seeing what relation there was between human activities, supposed to be thus so naturally expressible in sounds, and the visible or other sensible qualities of things, which men had had no difficulty in naming. The difficulty vanished on closer examination, because it appeared that the names of colours, &c., when sufficiently analysed, had roots themselves expressive of some human activity (*e.g.*, Sk. 'var*n*a,' colour, being from a root which means to 'cover'). Yet, while giving in his adhesion to Noiré's theory in general, he is still constrained to allow (as Noiré does not) that a certain number of roots may have had other origin. Roots that are expressive of natural sounds may very well, he thinks, have arisen by way of imitation, *i.e.*, onomatopoetically; and even where human activity is involved, as in the process of grinding, he is not sure that the original root expressing the act may not be an imitation of the sound resulting from the act rather than (as Noiré contends) the direct accompaniment of the act itself. These are, again, notable admissions, which might well have suggested to the author a less uncompromising tone in his preliminary contention with the Darwinian evolutionists. But, to let that pass, there is nothing but praise due to him for the spirit, and in general also for the matter, of all these later parts of ch. vi. They show him superior to the weakness of supposing that the origin of language, in all its multitudinous stages and varieties, is to be straightway solved by any single sweeping theory. At the same time he does very well to make as much as he can of Noiré's luminous idea. There is evident truth in the position that, as nothing is more natural than for men to act and to act in common, so it is on occasion of general bodily work that the special activity of throat and tongue will most readily be called into play. The real nerve, however, of Noiré's theory as explanatory of the phenomenon of conscious speech may be held to lie in that part of it which is not peculiar (if any part of it *is* quite peculiar) to himself, but which he has in common with all the more clear-sighted theorists about language within the present century. What turns any utterance into speech is not the fact of its arising upon this occasion or upon that—as the accompaniment of an overt activity rather than as the outcome of impressions passively received; but it is the fact that upon being sped it is taken up and thrown back

upon the utterer by his kind. What the poet says of a jest, that its—

> "prosperity lies in the ear
> Of him that hears it, never on the tongue
> Of him that makes it,"

is not less true of everything spoken. Language is an essentially social product, arising for practical purposes of communication between man and man, and only secondarily having an intellectual use for the individual thinker. Our author's reservations, in the act of adhering with such generous warmth to his friend's theory, may fairly be taken as declaratory to this more general effect.

The long chapter that next follows on "The Roots of Sanskrit" (pp. 331-419) need not long detain us, notwithstanding that its linguistic details in all their minuteness are intended to serve the purposes of the author's main argument. It is to be shown that the radical analysis of Sanskrit—assumed always to be that form of (Aryan) speech which not only retains distinctest traces of the manner of its original construction but also has on the whole the best title to seniority among its sister-forms—affords the exact verification that is wanted of the theoretic view, that men's first spoken utterances had reference to activities they consciously put forth in common. In the end, however, the author is himself not sure to what number of hundreds the thousand or so of roots that have been identified early or late by the labours of Sanskrit scholars must be brought down before the true ultimates, or rather primaries, are obtained; nor does he give as more than tentative a list of "The 121 Original Concepts"—"primitive social acts of primitive social men and states more or less closely related to such acts"—to which the few hundred roots gave more or less varied expression. It is, no doubt, an interesting historical fact to know—as far as may be known in this way—what ideas were chiefly in the heads of our Aryan ancestors. It is instructive also to be able to follow, so clearly and distinctly as appears to be possible in the case of Sanskrit roots, the kind of simple transformations whereby a small number of original elements can be made to serve the vast multitude of human needs and occasions of expression. We are not therefore brought even approximately face to face with the earliest efforts of human speech; though these, in general character, may have been of a kind not unrelated to that which is disclosed in the particular Aryan tongue that at once lends itself best to study and has thus far been studied with best effect. Still less do the "hundred and twenty mother-ideas of the Indian intellect," even if we take their discovery to be as remarkable an achievement of the "Science of Thought" as the author claims (p. 419), seem to carry us any length at all towards settling the philosophical questions that beset the human mind.

Does he then accomplish more for philosophy proper in what remains? The important ch. viii., on "Formation of Words,"

joins on to some interesting pages at the end of ch. vi., just before the thread of the exposition (as far as thread can be traced) was broken for behoof of the special linguistic inquiry of ch. vii. It was there shown how easily and naturally a root expressive of some primitive conscious act could be made to assume the variety of *verbal* phases (distinguished as active, neutral, passive, active transitive), and especially how, by way of what the author calls "Fundamental Metaphor" (a subject which later on he takes up again and follows out at length, in an interesting manner, from p. 485), speech originally expressive of the subject's own acts or states can be rendered applicable to events and changes in the objective world. He now, in ch. viii., settles down expressly to the task of following out the transformation of roots into the words—more particularly nouns substantive and adjective—of actual speech. First we have some loose dissertation on the Categories of Aristotle and other thinkers, with the result that Aristotle's table is taken as an at least practically sufficient index to the principles governing the transformation. I make bold to call the dissertation loose because, while little perception is shown of the issues involved in the various schemes of Categories propounded by different philosophers, the interpretation even of Aristotle's is curiously vague and uncertain. Instead of seeing that Aristotle might naturally, and did in fact, employ the word "category" to designate those *elements of predication*—whether subject or predicate—which he sought for by dissolving the tie of the proposition, he understands the word as meaning "predication" (p. 424), or again (p. 432) "kinds of predication," — obviously confusing 'predicament' (category) now with 'predicate' and now with 'predicable'. Also, he will have it (p. 432) that the word manifests Aristotle's insight into the fact that all words were in the first instance sentences—which sentences then dwindled into words. This is a remarkable gloss upon Aristotle's deliverance, to which he had elsewhere (p. 245) rightly called attention, that the logician must start with the proposition as representing the unit of thought; but, passing this by, are we then told, as we might expect, the various forms of "sentence" which the different kinds of word first assumed, before the process of shrinkage set in? By no means. There is put forward instead, from p. 433, the different conception, that language arises according as roots, which are "abstract, never concrete," become predicated "of this or that"—a process that is straightway, alternatively, called "applying the category of οὐσία or substance to the roots" (cp. p. 441). The equivalence of the two expressions is not very apparent, but, however that may be, we gather from the first of them that the process consists in predicating the (abstract) root "of this or that,"—that is to say, "root" is predicate in the case. Pass then to p. 443, and we read: "The first category predicates substance, the second, third and fourth quality, &c.". Here it is "category" that has become predicate. And what has

now become of the (abstract) root? I must confess that, after every effort, expended the more freely here because here if anywhere the author is touching philosophical ground, I can make out no coherent result from all this Category-business of his. The illustrations he gives of substantive nouns as involving abstract conception no less than adjectives, or again of some primitive root as lending itself to most varied application with or even without the aid of suffixes, are all very well; but exactly how the (Aristotelian) categories determine the process of word-formation—this is what remains obscure and perplexed to the end, for all his manifold references to them. And, supposing they did—as, of course, they in another way, or other formative notions in place of them, do—govern the process, does not this involve a distinct admission on the author's part that, underlying all such question of word-formation as he here seeks to grapple with, there is the properly philosophical question, What the fundamental principles of human thinking are? The study of Language may help to shed a supplementary light upon these; but when words themselves cannot be understood except in the light of the fundamental principles (expressed as "Categories" or what not), it is surely by another method, the method of subjective analysis as practised by Kant and Aristotle and philosophers generally, that the principles are to be determined.

The haphazard sequence of topics beyond the point to which we have thus far steadily pursued Prof. Müller on his track, makes it inexpedient, or hardly possible, to continue following him in the same fashion; and the more because his treatment now becomes so largely controversial. I refer not only to the "Conclusion" (ch. x.), in which he delivers himself, against Mill or others, on a variety of special philosophical questions, or to the remarks on (at least) "Propositions" in ch. ix., but also to the discussion on Logical Terms, carried on chiefly with Mill, which occupies the remainder of ch. viii., till he expands towards the close on that subject of Metaphor which he had touched upon earlier, at the end of ch. vi. The judgments, in the closing ch. x., on this or that question debated of late among philosophical thinkers show his keen interest in the topics of highest intellectual concern, but, though the deliverances have mixed up with them many a reference to Language, it rarely or never appears what real connexion the one line of observation has with the other. Before this general epilogue, which demonstrates nothing so much as the author's sweetness of controversial temper, is reached, the effort made, with a doctrine of Terms and Propositions (what is said on Syllogisms is of no account), to demonstrate the ground of philosophical vantage held by the linguistic student, is more systematic—without being more successful. I do not believe the logician exists who could profess himself helped, in his work of understanding the import of thought and regulating its exercise, by such distinction of Propositions as is here (in ch. ix.) hazarded,

with or without reference—for the reference has not even the merit of being steadily sustained—to the rudimentary forms of predication that may be imagined to have done duty for the awakening intelligence of the first generations of speaking men. And (in ch. viii.) let the reader examine the scheme, strangely entitled, of "Roots or Concepts," which, at p. 475, after his detailed criticism of Mill's account of Names, the author propounds as that better, nay "best," classification of words for logical purposes "which is supplied by the history of language". The scheme is strangely called one of "Roots or Concepts" when, whether conceptual or no, it is a question of the Words or Names into which Roots have passed; but it is more important to observe that the scheme does not appear to have any logical utility at all. How does it avail the logician, occupied with the concept as expressed in the general name which is the indispensable means of abstract consideration, to be told by what device of unconscious passage through the collective noun (which expresses a complex object of sense) the general name as instrument of abstract thought was originally forged? Collectives as such are to be considered by the logician only in order to be excluded. In Prof. Müller's suggested scheme of logical terms, and in all the controversial skirmishes through which he fights his way to it, there is no sign of his having ever fairly asked himself the question what the precise *philosophical* function of the logician is, or what bearing the history of the development of words, so far as it can be made out, could have upon it. To be sure, logicians in general, and Mill among them, have not been too careful to confine themselves only to such distinctions of terms, or pursue their distinctions only to such lengths, as concern their own business. They thus in many ways lie open to a criticism that could easily be made trenchant enough. But as for the emendations which Prof. Müller tries to make upon Mill in particular, it cannot be said that they are successfully or skilfully made. To prove this in detail, by comparison (as would be necessary) of statements of the two writers, is more than can be attempted at the end of this lengthy notice. It may suffice here to point to any two or three pages among the twenty or thirty from p. 444, in support of the charge against our author of a want of grasp in these matters of logical controversy. Or, to narrow the issue, let trial be made of his character for discernment—meaning, always, philosophical discernment—upon the three pages, 471-4, given to the topic of "Connotative and Denotative Terms".

EDITOR.

Educational Ends; or, The Ideal of Personal Development. By SOPHIE BRYANT, D.Sc. London: Longmans, Green & Co., 1887. Pp. x., 292.

Mrs. Bryant has long been known not only as a distinguished

teacher but as a particularly suggestive thinker about educational problems. The speculative impulse which was plainly discernible in her occasional utterances has now concentrated itself in a serious philosophic effort, the result of which is a very thoughtful and instructive volume.

As its title suggests, Mrs. Bryant's work is a comprehensive and systematic handling of the ultimate ends of education. It is evident that the treatment of this subject, in order to be adequate, must transcend the limits of what is customarily marked off as the theory or science of education. A complete and final theory of education presupposes a definite conception of the perfect, or ideal, man, whom it is the concern of the educator to help to fashion. Our author directly addresses herself to the task of defining this ideal personality. Such a being unites in himself the two sorts of character or personal excellence that make for the ethical end, the Good, and the logical end, the True. Since the ideal mind or character (at once intellectual and moral) is wholly determined by reference to the objective end which it pursues, the treatment of it may be called ethical and logical. And indeed the author herself appears to regard her work as primarily or mainly a study in logic and ethics. At the same time it is plain that any discussion of such character as real or realisable, whether actually developing itself now, or capable of doing so under certain supposable conditions, must include an account of the process by which it forms itself. It is evident that the author recognises this side of her subject when she writes in the opening of her Preface: "The inquiry into Educational Ends, which is the object of this book, resolves itself immediately into an inquiry into the nature of that development which issues in the production of *standard* character". But here we clearly find ourselves within the boundaries of the psychological domain. For it is manifest that the understanding of the perfect man, no less than of the most imperfect of mortals, is only possible by help of general laws of mental development. Hence Mrs. Bryant's volume, though it seems to disclaim the character of a psychological treatise, does give us, in a fairly complete form, what may be called a psychology of the *élite;* and herein its peculiar significance and value appear to lie. With our modern habit of separating by such definite boundaries the speculative region of psychology on the one side from the practical regions of ethics and logic on the other, we are apt to forget that the ends which these last formulate exist only in relation to conscious minds that conceive them as objects of desire or as desirables. Ideal ends are, as Mrs. Bryant clearly shows, correlated, or rather vitally united to, the right or standard person who is so constituted as to strive after them. That this connexion is a real one is plainly seen in the fact that the psychologist, notwithstanding his assertion that he gives an account of all sorts of mind indifferently, finds himself com-

pelled to prepare the way for the logician and the moralist by taking special account of the correct thinker and the right actor. Mrs. Bryant's volume is original just because it clearly discerns the overlapping of speculative and practical science here, and carefully defines the extent of this overlapping.

After a short introductory chapter on the Educational End in general, the author proceeds in Part i. of her volume to trace the several stages or moments in moral development. We have first of all an account of the process as determined by the relation of the individual to the community and the claims of the latter on the former. This is dealt with in two chapters, "Self and the World: Duty" and "Self and Duty: Virtue". The process of moral growth is then followed out as spontaneous development independent of social control, under the heading, "The Quest of Freedom: Self-Devotion". By means of the Kantian idea of the virtuous man thus reached, *viz.*, the man with the good will who "finds his perfection in pursuing those objects which further the perfection of the community," the author is enabled to develop a new and highly interesting system of virtues, which combines in an unexpected way pagan elements, as courage, with Christian elements, as faith and humility. The sketch of moral development is brought to a close by two chapters entitled "Object of Moral Devotion: Social Virtue" and "Sovereign Self in Sovereign Community," in which the mutual implications of individual and social virtue, and of the freedom of one and of all, are ably set forth.

In much the same way as the process of ethical development is here handled, that of logical development is dealt with in Part ii. The author leads her readers on from the first beginnings of the work of unifying the elements of experience into knowledge in what she calls "The Unity of Momentary Consciousness," or Perception, up to the final synthesis effected by science and philosophy. Here, as before, the object is at once to make clear the end and to explain the process by which this is realised. On the whole, this Part seems fresher and more suggestive than Part i., where, perhaps, the influence of Kantian thought is a little too apparent. However this be, the short account of logical processes is characterised by a union of shrewd psychological observation and logical penetration into the right methods of intellectual search.

The work concludes with a chapter on "The Unity of Educational Ends". By this is meant that ethical and logical character virtually include one another, that "moral character subserves and is necessary to the production of intellectual perfection," while, conversely, "truth being possessed righteousness fulfils itself".

This brief summary of the contents of Mrs. Bryant's work may suffice to indicate its scope. In dealing with such a subject from a new point of view, it was to be expected that the author would

now and again prove difficult; and it is probable that the critical reader will more than once be disposed to raise an objection. One point which the volume seems to leave rather vague is the precise relation of standard to typical character, or of ideal to universal development. The point is approached where the author touches on the connexion of the problems, how to make the most and the best of ourselves, and brings the "most" under the "best". This, however, she succeeds in doing, as it seems, by construing the "most" intensively as "greatest evolution of energy," rather than extensively as completeness of function or many-sidedness. It may be said with some force that there is a certain rivalry between the universal development aimed at by a Goethe and the loftier flights of moral and even of intellectual excellence so well described by Mrs. Bryant. That she has not deeply felt this difficulty seems conjecturable from her final chapter, which, in its complete identification of the logical and the ethical character, appears to contradict not only common facts but the observable tendencies of development. Mrs. Bryant does not apparently identify the True and the Good conceived objectively, but only seeks to demonstrate psychologically the identity of the will which is directed to each. But if we find that men do as a matter of fact show intense earnestness in the pursuit of truth and comparative indifference with respect to the moral end as a whole, it seems impossible to say that the logical and ethical purposes necessarily involve one another subjectively or psychologically. It is probably not insignificant, too, in this connexion, that Mrs. Bryant deals only with the logical and the ethical end, and altogether ignores that end of the Beautiful which is the dominant influence in so many lives.

As a relief from the severity of her general treatment of the subject, the author does not fail now and again to give us an interesting concrete observation, and once at least a delightful literary allusion. Some, in fact, may think she is at her best, not when discoursing on the abstractions of logic and ethics, but when she is presenting with admirable lucidity and scientific insight some new observation on human and especially childish ways, evidently plucked from the field of personal experience. Her remarks on points like the relation of self-will to obstinacy, and the varieties of stupidity (of which one, by the by, and that the more melancholy, is characteristic of town-children), are of great interest to the educator, and are sometimes turned with a literary skill that reminds one of George Eliot. It may, perhaps, be hoped that Mrs. Bryant will follow up her theory of ideal development by an account of some of the more frequent and striking varieties of actual growth, viewed in their relation of conformity or nonconformity to the standard process.

JAMES SULLY.

A Short Introduction to the Study of Logic. By LAURENCE JOHNSTONE. London: Longmans, Green & Co., 1887. Pp. v., 250.

This little book comes before the world under the express sanction of the authorities of the Roman Catholic Church in this country. From this point of view it possesses a certain interest, which its intrinsic merit cannot be said to command. It is divided into three parts, headed "The Agent," "The Act of the Agent," "The End of the Act of the Agent". These correspond in the main to the psychological, the formal, and the material divisions of logical doctrine. There is also a short introduction, besides 40 pages of questions serving as an examination on the preceding matter. The book may be commended for its general uniformity of method and treatment. The examples are novel and varied, but in some cases do duty for explanation. Others are chosen rather for their doctrinal than their purely logical interest, and are expressed in a tone of dogmatism hardly compatible with due encouragement of the logical spirit. The mingling of formal with material considerations adds to the interest of the book for the general reader, but, unfortunately, these are not always very clearly distinguished, and some confusion results. The less technical portions—as Definition and Division—contain good remarks, though somewhat marred by adherence to old scholastic terms undefined and unexplained. The most decided merit is that a preparation is made for the discussion of Fallacies by the enunciation of the principles of Demonstration and Method, which the fallacies are shown to violate. In the ordinary text-book, these fallacies (except those which are purely formal) seem to come before the student from an unknown region and to have but little bearing on what precedes. The treatment of psychological and philosophical questions is crude. The student is expected to imbibe, without explanation or discussion, such statements as the following (pp. 10, 11):—

"The mind is a 'tabula rasa' before it receives any impressions from without. It receives impressions, or the matter for ideas, through the senses, upon which the impression is made. By means of the 'sensus intimus' man becomes conscious of these impressions, of which the imagination then forms a picture or phantasm. Up to this point the cognition is merely a sensitive or sensible one, like that of animals. But from the picture on the imagination, the intellect draws that element which is akin to itself, that is, the immaterial incorporeal element, throws it into its mould—so to say—and the result is the 'species intelligibilis,' formed in the intellect itself, and representative of the exterior thing. When informed by the 'species intelligibilis' of a thing, the intellect simply names that thing to itself with a mental word; and the mind is conscious of the possession of its idea. . . . For instance: the eye sees a fan-tail, and thus there arises an external sensation; the consciousness of this sensation, obtained by the 'sensus intimus,' supplies the matter for the phantasm of the fan-tail, which is next formed in the imagination; and then in the intellect the 'species intelligibilis' or spiritual representation of the fan-tail comes into being; whereupon the intellect, then by a simple word, says in and to itself, fan-tail."

Turning to details we must point out several technical deficiencies and mistakes, which considerably detract from the value of the book as a manual of Formal Logic. The Proposition is not distinguished from—it is in fact apparently identified with—(pp. 12, 21) the Complex Term: the terms Quantity, Quality, Distributed, though frequently used, are nowhere defined: the rules for determining the distribution of the predicate, though required for application of the syllogistic rules, are not given; and Immediate Inference is nowhere treated. Certainly Conversion is dealt with, but the student is not informed that the converse is intended to be *inferred* from the convertend. Conversion being defined (p. 29) "the transposition of the terms of a proposition," all we learn is (on p. 30) that "in simple conversion the same quantity is retained as well as the same quality," and here "the two judgments are identical"; while "in conversion *per accidens* the quantity is changed," and here "if the convertend is true, the converse must be true, but not *vice versâ*". Everything said on the subject leads the student to conclude that "All P is S" is identical with "All S is P" and may be inferred from "Some S is P". For, in the first case have we not *retained*, and in the second have we not *changed*, the quantity of the judgments?

Again, the Syllogism having been defined so as to include *every* kind of inference (especially inductive), such rules of syllogism, as apply only to demonstrative arguments containing three terms and involving the elimination of one term are at once given. The apparent object of so defining syllogism is that the author may introduce a flagrant *petitio principii* on p. 130, where he *proves* that Induction must be syllogistic, because "syllogism is the form of Logic". Besides the error of applying the ordinary syllogistic rules indiscriminately to every kind of formal reasoning, his explanations of these rules suffer from several very serious defects. Thus (on p. 39) an illustration of Ambiguous Middle is *explained* thus: "The middle term is applied in the major premiss" to a certain class of things, and "in the minor to an individual". The student is bound to infer that "All beasts are dumb, my dog is a beast, therefore my dog is dumb" involves the fallacy of ambiguous middle. On p. 40, a case of Illicit Process is explained as involving the fallacy of four terms, two of these terms being a certain term used as "a particular term," and the same term used as "a universal term". This leads the student to infer that if the middle term is distributed in one premiss and not in the other, or if a term is distributed in the premiss and not in the conclusion, we commit the fallacy of four terms. On p. 42, "Some books are hard to understand, but Robinson Crusoe is not hard to understand," are given as two *particular premisses* from which no conclusion can be drawn, whereas, of course, we may rightly conclude—"Some book is not Robinson Crusoe".

The treatment of Conjunctive and Disjunctive Syllogisms is

strangely confused. On p. 52, both are said to be based on the "principle of the excluded third".

"For instance (p. 53), the conjunctive proposition, 'No one can at the same time sing and play the flute,' leaves no middle course open between affirmation and denial; neither does the disjunctive proposition into which it can be resolved. He either sings or plays the flute, which may be further simplified into,—He either sings or he does not sing; he either plays the flute or he does not play the flute."

The punctuation here is peculiar, but apparently we are to understand that the conjunctive and the disjunctive propositions given above are equivalent! But what connexion has either of these propositions with the "principle of the excluded third"? Are we to understand that Mr. Johnstone has discovered no alternative amusement besides the practice of singing and that of playing the flute? May he not, for instance, employ himself in writing an Introduction to Logic? Even if the statement, "He either sings or plays the flute," were really equivalent (as the author says) to the two statements, "He either sings or he does not sing," and "He either plays the flute or he does not play the flute," nevertheless the exemplification of the principle of the excluded third would be not the original disjunction between singing and playing the flute, but between singing and not singing, and between playing and not playing. However, Mr. Johnstone here errs in good company. Again, on p. 53, we are told that "no member of a disjunctive should include another member," yet, on p. 55, we learn that, though *two* alternatives are necessarily exclusive, yet *three or more* are not necessarily so: "*e.g.*, a magistrate is either a justice of the peace, or a mayor, or a stipendiary magistrate; but it does not follow that one who is a justice of the peace is not a mayor". But why should we be prevented from saying, 'A non-stipendiary magistrate is either a justice of the peace or a mayor,' and thus using *two* non-exclusive alternatives? The author's distinction seems quite arbitrary.

The treatment of the Predicables and of the terms Essence and Accident, which form the basis of the exposition of Induction, is very loose and inadequate. The author begins with a circle in defining species—not the only circular definition to be found—thus (p. 19): "The application of a universal term to things is . . . *specific*, when it indicates the species of the thing to which it is applied". On p. 74, "The essence is that which makes the thing what it is"; and on p. 75, "The essence of the thing is comprehended in the idea or concept representative of it". Equipped with these two explanations of essence, which he has to reconcile as best he can, the student passes to Induction, and learns (p. 129) that one of the rules for its correct performance is, "not to mistake merely accidental qualities for those that are essential," and yet (on p. 133) it is *by* induction that "we come to know the essential characteristics of the species". Thus, first, the examination of our concepts will give us the knowledge of

the essence of things; then, using this knowledge, we are enabled to generalise; and, finally, the result of our generalisation discloses to us what is essential! The circular character of the whole procedure is best shown by quoting the illustration on p. 132:—

"Because the quality of having warm red blood belongs to all known birds, it must be part of their specific nature; but unknown birds have the same specific nature as known birds; therefore (according to the axiom, like reasons have like results), the quality of having warm red blood must belong to the unknown as well as to the known birds; *i.e.*, be a universal and essential property of the species."

Circle within circle is here disclosed. The induction is made in the major premiss, for nothing more nor less is to be understood by the expression "specific nature," than "that which belongs to every member of the species". After having made this inference, it is difficult to see what need we have of the axiom, "like reasons have like results," since we have only to conclude what is syllogistically involved in the premisses.

Part Third, on Material Logic, contains in brief the author's system of philosophy, which is simple, if not profound. The key-note is Faith—faith in Reason, in Intuition, in Common Sense, in Sense-Perception, in Authority, in the Church, and in Revelation. Still (p. 192),

"To assert the existence of a subjective criterion, by which the individual intellect unfailingly assures itself of the truth of each and every one of its cognitions, would be to vindicate for the human race the gift of infallibility. . . . But a criterion there is . . . and this criterion must be Objective Evidence, *i.e.*, the intelligibility of the thing; or—in more intelligible phraseology—the object of thought itself, which is either mediately or immediately so obviously presented to the understanding, that we necessarily judge the thing must be as it is, and cannot be other than it is."

This sentence apparently expresses the author's deepest thought. After many further elaborate divisions and subdivisions, he propounds *rules* to be observed for ensuring the material truth of our cognitions. The patient student will, I fancy, with much labour be able from this complex mass of advice to extract the valuable truth that, in order to be quite certain that what he is quite certain of is really true, he must be quite certain that he *is* quite certain.

W. E. Johnson.

Essai sur le Libre Arbitre, sa Théorie et son Historie. Par George L. Fonsegrive, Professeur agrégé de Philosophie au Lycée de Bordeaux. Ouvrage couronné par l'Académie des Sciences Morales et Politiques. Paris: F. Alcan, 1887. Pp. 592.

Die Willensfreiheit des Menschen. Von Fr. J. Mach, k. k. Professor am Staats-Obergymnasium in Saaz. Paderborn u. Münster: F. Schöningh, 1887. Pp. ix., 274.

A pretty full summary of M. Fonsegrive's Essay on Free-will

has already been given in MIND xii. 621. From the mere statement of the author's results, it must have been obvious that the book was one of no ordinary merit. The historical part of the Essay is, indeed, not only a good history of the question of free-will so far as the facts are concerned, but at several points throws new light on the development of doctrines; while its critical and positive part contains one of the best recent statements of the indeterminist position. On all these grounds, some more detailed consideration seems desirable both of the historical and positive conclusions arrived at or suggested by it than was at first possible.

It must be recalled that M. Fonsegrive's indeterminism is founded on the spiritualistic conception of the soul, and that his definitions and distinctions are attached historically to those of the accepted representatives of Catholic theology. In both these respects his doctrine differs from the indeterminism of M. Renouvier, with its phenomenist basis and its divergence—as regards, in particular, the doctrine of divine prescience—from theological indeterminism. It is, however, from M. Renouvier that M. Fonsegrive has adopted his method of proof by appeal to the "practical reason"; and, partly in consequence of this, he states with exceptional clearness the modification that indeterminism makes in the conception of scientific law.

The extent of M. Renouvier's influence may be seen by comparing M. Fonsegrive's Essay with Dr. Mach's, published almost simultaneously with it, and briefly noticed in MIND xii. 631. The essential points of Dr. Mach's indeterminist theory are exactly the same as those of M. Fonsegrive's. It is distinguished, as "relative indeterminism," at once from "absolute determinism" and from "absolute indeterminism". It is made dependent on the doctrine of an immaterial soul of which not all the operations are correlated with processes in the organism, and it is attached in the same way to the orthodox Catholic doctrine. Just as M. Fonsegrive finds it necessary above all to fortify his position against the psychological determinism of the English empirical school and its French representatives, so Dr. Mach is especially concerned to oppose the psychological determinism of the Herbartians. Both writers make a decided advance in the psychological statement of the indeterminist position; rejecting the term "liberty of indifference" and much of the old phraseology about "the will" as a power independent of "motives". Where the difference appears is in the mode of proof of their thesis. There is, indeed, an almost verbal resemblance between Dr. Mach's argument that, when "absolute indeterminism" and "absolute determinism" have been refuted, "relative indeterminism" may be regarded as proved, and the same argument as stated by M. Fonsegrive. M. Fonsegrive, like Dr. Mach, contends that "relative indeterminism" is not inconsistent with the "principle of sufficient reason" and the law of causality derived from it; since

a "free" cause satisfies the principle just as much as one that acts by necessity. Nor, on the other hand, does Dr. Mach omit all appeal to the "practical reason". The difference is that with Dr. Mach the appeal to the practical reason is subsidiary when it is not surreptitious, while with M. Fonsegrive it is the argument that is regarded as finally conclusive. Dr. Mach undertakes to prove the indeterminist position by positive psychological arguments. M. Fonsegrive, in spite of an occasional inconsistency, such as the assumption that "absolute determinism" has been positively disproved, simply maintains that scientifically there is no absolute proof of determinism; that the metaphysical proof fails; that, consequently, since neither the thesis nor the antithesis is capable of proof on theoretical grounds, the practical reason must be called in to decide the antinomy in favour of free-will as an ethical postulate. The importance of this difference will become plain when the leading points of the history of the question have been briefly reviewed.

What M. Fonsegrive first of all brings out is that the whole controversy had its beginning in the efforts of the earliest humanistic thinkers to distinguish "that which depends on ourselves," τὸ ἐφ' ἡμῖν, from what depends on causes external to us. The speculative theory that was at first dominant both in Greek religion and philosophy was the conception of an external fate, beneath which man is powerless. The formation of the humanistic sciences required that this conception should be modified by a definition of the limits within which man has power, and of the nature of this power. The clear demarcation of that which depends on man was first achieved in Aristotle's definition of man's power over things as consisting in liberty of choice between equally possible alternatives. Man, according to Aristotle, not only has the power of choosing between the higher and the lower, but it is impossible to predict his choice; the future is really contingent. Aristotle, therefore, has a doctrine of free-will.

In interpreting Aristotle's formula, M. Fonsegrive makes clear, though without dwelling on the distinction, two aspects—the marking off of that which depends on man, and the ascription of a certain contingency to human action. Aristotle's doctrine, according to M. Fonsegrive's interpretation, which regards the "contingency of futures" affirmed by Aristotle as real, becomes a free-will doctrine in the modern sense. For the historical course of the free-will controversy has brought it about that indetermination of human actions has become identified in philosophy with free-will. If the controversy had taken another course, however, the Aristotelian formula in its other aspect, as the distinction of that which depends on us from that which depends on things, might equally have been called a free-will doctrine. This may be shown historically from an incidental use of the term "free-will" that occurs at the beginning of the modern period.

When humanistic speculation of a scientific kind began again in

modern times, it was found necessary, as it had been in antiquity, to distinguish the part of man in determining his own lot from the part of things. For if man is absolutely subject to a power external to himself, obviously humanistic speculation can have no practical bearing. This was seen by Machiavelli, who, in more than one passage of his writings, discusses the relations of that which in human affairs is in the power of man, and that which is in the power of "fortune". It is of special interest that in making this demarcation, as Aristotle had made it before, he ascribes that which is in the power of man to "free-will," and that, at the same time, although taking this term from the language of Scholastic philosophy, he uses it without any implication of indeterminism. The passage in which he thus makes use of the term "free-will" occurs in chapter xxv. of *The Prince.*

"It is not unknown to me," he begins, "that many have held and hold the opinion that the things of the world are in such wise governed of fortune and God that men by their prudence cannot correct them, nor have they any remedy thereto; and by this they might judge that it were good not to labour much in things, but to let themselves be governed by fate. This opinion has been more believed in our times through the great variation of the things that have been seen and are seen every day, out of all human conjecture. Thinking on which, sometimes I have in some part inclined to their opinion. Nevertheless, *to the end that our free-will be not destroyed,* I judge that it is true that fortune is the arbitress of half our actions, but that she yet leaves the other half, or little less, to be governed by us."

It will be observed that in this passage contingency, so far as it is implied at all, is referred rather to the part in human affairs that depends on external things than to the part that depends on us. This last, for anything that is implied so far, may be rigidly determined according to special laws of human nature to be afterwards ascertained by those who cultivate the sciences of man. And it is remarkable that in Machiavelli's general political theory human nature is held to be the same in all ages and the characters of men invariable; so that individual men are successful because fortune is favourable to their particular character, and fail because they cannot modify their character, and consequently cannot change their modes of action, in accordance with changing events. The clearest empirical distinction, therefore, can be drawn between that which depends on things outside and that which depends on man without the assumption of the least indetermination anywhere. For of course the contingency supposed in things by the reference of changing events to "fortune" need not be more than an apparent contingency, as indeed the contingency attributed by Aristotle to "that which depends on us" need not be more than apparent.

The "freedom," consisting in a certain relative independence of circumstances, that is attributed to man in Aristotle's formula is now seen to be separable from the notion of any real contingency. There is another sense of the term "freedom"—to

which it has also been proposed to apply the term "free-will"—that has unquestionably been the possession of determinism from the beginning. No special historical evidence is needed to show how the distinction between the "freedom" and the "servitude" of the mind, between subjection to "passion" and the control of passion by "reason," has been insisted on, both in ancient and modern times, by determinist philosophers.

Indeterminists themselves define "moral freedom" as the state in which the struggle characteristic of free-will has disappeared. It is, indeed, regarded as a case of "free-will," but only because acts of free-will have been required to produce it. The clear view of the nature of complete freedom, in the sense of moral "autonomy," made Aristotle, and, as M. Fonsegrive points out, antiquity generally, regard the power of choosing between the lower and the higher, not absolutely as a perfection, but as the characteristic of an imperfect being that participates at once in reason and in the irrational element in things. It is this act of choice between the lower and the higher, and not the degree of our "independence" of things, or the nature of moral autonomy, that has finally become the battle-ground of the opposing schools. The problem has come to be, Is there anything strictly indeterminate in the act of choice or deliberation? This definite shape has been assumed by it, as M. Fonsegrive shows, in the controversies of Scholastic philosophers and of Catholic and Protestant theologians. In modern philosophy, as in theology, it has continued to be associated with the question of man's moral responsibility before law, divine or human. Each school has been required to show that its own view of the act of choice is compatible with this.

When it is made clear that the real contingency of the voluntary decision is the essential part of the modern conception of free-will, the irrelevancy of many of the ordinary arguments for free-will in the sense of indeterminism becomes at once manifest. To show, for example, that in certain decisions of the will we are not constrained by an external power, or to point to the existence of "moral freedom," is to indicate a conception of freedom that is perfectly consistent with determinism. It must, on the other hand, be conceded that no assertion, from the determinist point of view, of freedom in either of these senses, can satisfy the indeterminist. Indeterminists feel that, as Dr. Mach points out, the doctrine of an "internal necessity" is just as much determinism as the doctrine of an "external necessity". What the indeterminist requires for the completion of his idea of freedom is that the act of choice should be free alike from external and from internal "necessity," not merely from constraint; and this "real contingency" of the act of choice is exactly what it is of the essence of determinism to exclude. For "the real contingency of the future" involves a break in the chain of causation, both psychological and physical. Here Dr. Mach does not quite face the real difficulty. When it becomes a question of proving that

the decision of the will is not necessary, he urges that it is not constrained. M. Fonsegrive—and this is his special merit—relying, as has been said, on M. Renouvier's argument from the practical reason, has shown the bearing of indeterminism on causation with the utmost clearness. There is, no doubt, some ambiguity in his defence of free-will when he contends that the principle of sufficient reason is satisfied by "a free cause"; but, when he shows that by no scientific hypothesis can indeterminism be made consistent with absolutely uniform physical law, the ambiguity disappears. A consistent indeterminist is obliged to maintain that, with identical psychological conditions of a decision, the decision may vary without any new cause except a strictly "imprevisible" act of "free-will". Now this means, as M. Fonsegrive shows, that, since the decision is manifested externally, a certain portion of energy must be created or annihilated. Whatever may be the psychological meaning of a "free" as opposed to a "necessary" cause, it is admitted to be inconsistent in physics with belief in the conservation of energy as "an absolute law, without restriction". But, M. Fonsegrive proceeds, as a matter of fact, experience nowhere shows undeviating conformity to law. And to say that all falling short of absolute exactness is due to defects in accuracy of observation is a mere assumption. The slight apparent deviations of experience from uniformity may be in part the expression of real deviations. And if the world is governed by a will instead of by an impersonal fate, by a flexible "law of love" instead of by an inflexible "law of pure reason," then we should not expect to find the absolute uniformity that determinism requires. But there are moral grounds for affirming theism and the doctrine of free-will that is in logical harmony with it. Then, since experience by itself does not hinder the affirmation, the belief is philosophically justified. The claims of science are satisfied by the admission that the course of things is *approximately* uniform. And approximate, though not complete, uniformity is consistent with free-will. For the creations and annihilations of energy that are due to human free-will are in any case very small. Perhaps they in part balance one another. It is not a "relative indeterminism" such as this, but only an "absolute indeterminism," that contradicts science; just as, on the other hand, it is not science but a certain type of metaphysics that requires "absolute determinism".

Before the logical character of M. Fonsegrive's argument can be appreciated, it must be cleared of some incidental positions that are either superfluous or inconsistent with the mode of proof adopted. One of these has already been indicated. M. Fonsegrive is not always willing to make the concession corresponding to that which he requires of determinists. He shows conclusively that, even if psychological determinists can explain by scientific hypotheses (such as Leibniz's "obscure perceptions") the acts of choice that seem most difficult of explanation, this does not prove

determinism against objectors; since the scientific explanation takes for granted in the disputed case the uniformity that indeterminists deny. This being conceded, however, the indeterminist must admit in turn that he is leaving scientific ground altogether. If absolute determinism cannot be proved on scientific grounds, neither can it be proved scientifically that there are any residual phenomena of which no scientific explanation is possible. Psychological determinists have not, as a matter of fact, been baffled by the phenomena of deliberation; and in any case it would be more plausible to attribute difficulties to the imperfection of their science than to the "free causes" of indeterminism. M. Fonsegrive has only shown that experience does not compel the belief in absolute uniformity of law, not that absolute uniformity is disproved by experience. The argument, therefore, in which he concludes immediately from the untenableness of "absolute determinism" and of "absolute indeterminism" to the truth of "relative indeterminism" has no validity. Again, has any such belief as "absolute indeterminism"—which ought to mean that no inference from the past to the future is possible—ever been held? As believers in "absolute indeterminism" M. Fonsegrive classes Epicurus, Pelagius, Hume and M. Renouvier. Yet he himself, in the earlier part of his essay, has proved against M. Guyau that for the Epicureans there was at least no indetermination in the case of external things, but (after the first declination of the atoms) only in the case of man. And in the interesting chapter on "English philosophy from Hobbes to our days" (pt. i. bk. iii. ch. vii.), in which he shows the originality of the contribution made by English empiricism to the free-will controversy, he gives to Hume especially the credit of the "negative synthesis" that replaces both "free-will" and "necessity" by "invariable sequence". It is, however, rather the logical consequences of Hume's resolution of experience into isolated atoms of sensation that M. Fonsegrive has in view in classing him as an "absolute indeterminist" than his explicit doctrine as regards free-will; and with Hume he apparently classes M. Renouvier on the ground of his explicit indeterminism and his "phenomenism". Hume's phenomenism is, he holds, the only logical form of that mode of viewing the world which seeks an "extensive unity," as the pantheism of the Eleatics is the only logical form of the view which seeks a "comprehensive unity". Pantheism requires that there should be only one Being, including in itself all modes of being; phenomenism requires that there should be a multitude of perfectly isolated beings. Now the "pure Being" of Parmenides is the only metaphysical conception that can justify the assertion of absolute necessity; while Hume's psychical atoms, being absolutely independent of one other, suppose absolute indetermination. Here M. Fonsegrive's argument confounds the independence of individual beings with the contingency of their actions. The idea of independence

is, however, as we have seen historically above, separable from the idea of contingency. And, logically, the actions of an independent atom may be conceived to be in themselves rigidly necessary. If any interaction of partially independent beings is supposed, this only makes the changes more complex, without destroying their necessity. As to the doctrine of Pelagius, whom also M. Fonsegrive places in the number of absolute indeterminists, its difference from the orthodox Catholic doctrine seems to consist not so much in the assertion of a greater amount of indetermination, of real contingency, as in the ascription to man of a greater natural disposition to good, or of a greater power over his own fate. So far as the mere indeterminism is concerned, St. Augustine, according to M. Fonsegrive's interpretation (p. 112), does not differ from Pelagius. While we seem to have found so far no indeterminism that is more than "relative," looked at in another way all indeterminism is "absolute". For although it may never have been held that in practice no inferences can be made from the past to the future, yet, according to the indeterminist view, the effect of a decision of free-will may make itself felt at any point of the series of phenomena; and so there is no point where a break is impossible. The choice then, as M. Renouvier would say, is between determinism simply and indeterminism simply.

The exceptions that may be taken to parts of M. Fonsegrive's argument do not, however, affect his central contention, that there is logically a place for real contingency. A determinist need have no hesitation in admitting this. When acts of free-will are classed frankly with miraculous interruptions of a pre-ordained order that is maintained on the whole, and when prevision is at the same time allowed to be possible within scientific limits, it must be allowed that the whole conception of which these strictly "imprevisible" acts form part cannot be scientifically disproved. Even when he has transferred the question to theological ground, however, the indeterminist is not exempt from attack; for here there are the predestinarians to contend with. M. Fonsegrive, with his clear view of all that is involved in indeterminism, is only able to escape from the objection that free-will is incompatible with divine foreknowledge by refusing *a priori* to discuss it, by opposing to it what he calls "une fin de non-recevoir," on the ground that "the foreknowledge of God is incomprehensible," and so cannot be known to exclude human free-will (pp. 351-3). The only way of escaping this objection philosophically is to admit, with M. Renouvier, that the divine prescience is not absolute. That admission being made, the form of philosophical theism that includes the belief in free-will takes its place as a metaphysical doctrine, to be affirmed or denied on philosophical grounds. The ground on which M. Fonsegrive, following M. Renouvier, contends that it should be affirmed, is, as has been seen, that it is required by "the practical reason". The belief in free-will is the only secure basis of moral responsibility.

So far as M. Fonsegrive aims at showing that the free-will question finally becomes one of metaphysics, his argument is perfectly cogent. The last step however, the affirmation of a belief on the ground of the "practical reason," is open to dispute. One possible position, as I have ventured to urge, against M. Renouvier (see MIND No. 45 and *Critique Philosophique*, Nouv. sér. An. iii. No. 8), is that, instead of the system involving free-will, the system involving absolute determinism ought to be affirmed, because it satisfies the desire for an intellectual ideal; this ideal, in theoretical philosophy, being alone relevant. To this contention M. Renouvier has replied (*Critique Philosophique*, Nouv. sér. An. iii. No. 9) that the moral ideal conflicts with what is held to be the intellectual ideal, and that, as this last is not forced on the mind, the logical position remains for the intellectualist one of scepticism, from which only the acceptance of the postulates of the practical reason offers a way of escape. Now it is interesting that, so far as the question of free-will is concerned, M. Fonsegrive, in a discussion of the determinism within the limits of science advocated by M. Ribot, to a certain extent anticipates the answer to this. M. Ribot's "relative determinism," as it may be called, is obviously, from M. Fonsegrive's point of view, the complement of the "relative indeterminism" on which he more especially dwells. He ought, logically, to admit that it is the only scientific position. For, on one side, free-will, as he defines it—that is, as having for one of its characters the theoretical impossibility of prevision even when all conditions, physical and psychological, are known—introduces an element of which science, psychological as well as physical, can take no account; and, on the other side, M. Ribot makes no dogmatic affirmation of absolute determinism. Yet this position does not satisfy M. Fonsegrive. He points out that, carefully as M. Ribot's scientific determinism is limited, it inevitably tends to pass beyond scientific limits. Now this, instead of being an argument *against* scientific determinism, is in reality an argument *for* metaphysical determinism. What it proves is that even in the most severely restrained statement of the scientific position an ideal is already suggested to philosophy. This ideal, as M. Renouvier has shown, is not forced on the mind; it is not completed by science: but, on the other hand, it is not arbitrary; it is inevitably suggested.

And is it so certain that the ethical argument is in favour of indeterminism? Determinists have often contended that it is really the denial of the necessity of human actions that would destroy moral responsibility; and M. Fonsegrive admits that determinism supplies a basis of its own for the greater part of ethical, political and æsthetic theory. What he urges on behalf of indeterminism is that it gives a certain "accent" or a certain "grace" that would disappear with the destruction of the belief in free-will. Yet in a chapter (part ii., bk. ii., ch. v.) in which he discourses of "the degrees of freedom" and the progress from

one stage of moral freedom to another by the exercise of free-will, he dwells especially on "moral gymnastics"; pointing out, by way of illustration, with what psychological exactness "examples and occasions," as aids or hindrances of the moral life, have been set forth in Catholic manuals (p. 477). Now does not all this minute attention to psychological conditions rest on the *determinist* part of the Catholic theory? And in what way has the doctrine of an undetermined free-will tended here to rescue that spontaneity which, M. Fonsegrive elsewhere urges, is unrecognised by determinism? In political theory, again, he holds that the doctrine of free-will gives a certain additional sacredness to personal rights. History at least, it may be objected, does not confirm the association of free-will doctrines with political freedom. As to the logical bearings of the opposed doctrines, M. Fonsegrive, in his chapters on "Consequences," seems occasionally to be forgetful of what he has himself made plain in the earlier part of the Essay. "The three characters of free action," he has said earlier, are "contingency, spontaneity and intelligence". He makes plain in his exposition, however, that the first character alone, and this in the sense of a real "ambiguity of contingent futures," is the distinguishing character of the indeterminist conception of free-will. When, therefore, he sets forth the consequences of his total conception of "free action," this proves nothing in favour of indeterminism, at least against those determinist doctrines that equally recognise "spontaneity and intelligence" as characters of the higher kinds of activity. "The enemies of free-will," M. Fonsegrive says, are "habits and passions" (p. 472). But are these the enemies of strictly indeterminate action as such, and not rather of action that is at once rational and spontaneous in a sense compatible with determinism? If anything is to be proved in favour of the consequences of the indeterminist doctrine, the element of real indetermination ought to be detached from the others and its consequences viewed separately.

THOMAS WHITTAKER.

VII.—NEW BOOKS.

[*These Notes (by various hands) do not exclude Critical Notices later on.*]

The Life and Letters of Charles Darwin, including an Autobiographical Chapter. Edited by his Son, Francis Darwin. 3 Vols. London: John Murray, 1887. Pp. x., 395; ii., 393; iv., 418.

Eagerly expected, this book has also been so universally welcomed that there is no need to enter here into any particular description of its contents; while yet description is almost the only kind of notice suitable in the case. When it is said that, from beginning to end, it contains as little as possible that is not from the hand of Darwin himself, everything is said to recommend it to those who have not so far had the opportunity of reading. Yet it would be ungrateful not specially to acknowledge the exemplary care with which the editor has done everything that was necessary, and almost everything that could be desired, to link together the stages of his father's life as traceable in the "Letters"; nor less the frankness (but also at some points the delicate reserve) with which, in a chapter of personal "Reminiscences" (i. 108-60), the great naturalist as he lived and laboured is set before us. The later chapter entitled "Religion" (i. 304-17), though containing but a few lines not written by Darwin, should also be noted in evidence of the editor's conscientious candour. The autobiographical sketch (i. 26-107), placed first after the preliminary account of lineage, was written for the family only, but as now given to the public (with some omissions) is a document of unsurpassable and enduring interest. Never did a mind of highest rank in its class turn itself inside out with such perfect freedom from all affectation; and never did unpretending record reveal, or rather betray, a more attractive human character. Perhaps it is enough to add here that "Autobiography" as well as "Letters" insist upon nothing more strongly than their writer's sense of his intellectual limits; while at the same time the "Autobiography" (i. 100) tells of a curious dying-away of the "higher æsthetic tastes," as life went on and his mind more and more became "a kind of machine for grinding general laws out of large collections of facts". The proclamation of philosophical (as distinguished from scientific) incompetence has a truly remarkable interest in view of the fact that, whether himself philosopher or not, he has given philosophers more serious occasion for thinking than, perhaps, any one scientific inquirer that ever lived. To vol. ii. (pp. 179-204) Prof. Huxley contributes a chapter "On the Reception of the *Origin of Species*" (1859), in which the philosophical aspects of Darwin's work are nowise overlooked. Here (p. 188) there is an interesting reference to Mr. Herbert Spencer's earlier (public) advocacy of the Evolutionist doctrine—advocacy, it might have been mentioned, carried to the length of *The Principles of Psychology* as first published in 1855. With characteristic enthusiasm, Darwin himself bursts out in one letter of 1870 (iii. 120) thus:—"I suspect that H. Spencer will hereafter be looked at as by far the greatest living philosopher in England; perhaps equal to any that have lived".

Tertium Quid: Chapters on various Disputed Questions. By Edmund Gurney, Late Fellow of Trinity College, Cambridge. 2 Vols. London: Kegan Paul, Trench & Co., 1887. Pp. viii., 372; 302.

Mr. Gurney here publishes a collection of essays (three of which—on

"Natural Religion," "The Utilitarian 'Ought,'" and "Monism"—originally appeared in MIND) dealing, for the most part, with "matters of contemporary controversy". "In most of these questions," he says, "I am conscious of 'a great deal to be said on both sides' . . . In most of them the true view seems to me to depend on taking a standpoint, or in recognising facts and principles other than those which partisans have usually recognised or taken. And this truer view, if such it be, is not one that would extenuate differences, or induce lions to lie down with lambs, or generally tend towards compromise in the ordinary sense; its immediate tendency, on the contrary, is rather to make each of the duels triangular. In short, it is a *tertium quid*." This idea of a *tertium quid* is less obvious in the second volume, which consists exclusively of æsthetic essays (though in æsthetic controversies also the author regards it as applicable), than it is in the first. Here it gives a real unity to essays diverse in subject. In the first essay ("The Human Ideal") the author premises that Utilitarianism based on "Positivism" (in the wider sense) is the true ethical doctrine; and that it is perfectly possible to work strenuously for the Utilitarian ideal without having a belief in any order of existence beyond the natural order. The emotion with which life is contemplated when it is regarded as part of a wholly natural order does not, however, with one class of minds at least, rise to the height of a religious emotion. It cannot be assumed that the problem will be simplified by the disappearance of minds of this class. If, however, there were even a bare chance that there is a supernatural order, the ideal of Positivism would be transfigured by it. But, the author proceeds in the next essay ("The Controversy of Life"), science, in this relation, is "inexorably restrictive". "Views as to the transcendent worth and ever-progressive evolution of the individual life—views of some importance to individuals whose lives are in question—have received so far not the very slightest countenance from physics and biology; nay, they have been made gradually harder to entertain. And till this is altered—till those views can be based (as who can say they never will?) on some sort of objective evidence—scientific convictions must differ absolutely from religious convictions in the response that they can evoke in human hearts and imaginations." The direction in which Mr. Gurney is inclined to look for a reconciliation is indicated by his parenthetical question. He regards it as possible that "external testimony" may give positive ground for belief in continued existence after death. The question as to the positive grounds that would be sufficient to justify acceptance of the kind of evidence required to support such a belief is discussed in an essay on "The Nature of Evidence in Matters Extraordinary". The suggested answer is thus a *tertium quid*, because it would affirm an extramundane order on grounds that may be scientifically tested. The æsthetic essays of which the second volume consists are divided between Music and Poetry. The last essay ("The Psychology of Music") is based on the author's reply in MIND vii. 89, to some criticisms contained in Mr. Sully's review of *The Power of Sound* in vi. 270. In its present form it includes also replies to Prof. Stumpf and M. Georges Guéroult, and is so written as to make intelligible, even to those who have not read the author's larger work, his general position as to the nature of the characteristic effect wrought by music. Music, he insists, is "primarily a presentative art, bound to the perpetual production of pleasurable impressions that are otherwise unknown," and not primarily "a representative art, bound, like stage-gesture, to the perpetual depiction of recognised emotions and sentiments as they occur outside it". The theories that try to explain musical effect without the assumption of

a unique "musical faculty" to which it directly appeals, admit of reduction to three, *viz.*, that which derives it from "discoverable principles of order, or of freedom under conditions of order," and those which derive it from "suggestions of concrete external phenomena—movement and speech". The first theory, if it refers to general conditions of structure, does not explain why some tone-sequences are pleasurable, while others, which equally fulfil all formal conditions, are not. And if pleasurable sequences alone are said to have the required "freedom under conditions of order," then the problem is merely reaffirmed; for, outside the musical impression itself, no reason can be given why one sequence fulfils these conditions more than another. The remaining two theories have the defect of trying to explain the whole effect of music by means of symbolisms and suggestions that may indeed form part of the effect of large compositions, but that are not the central quality requiring explanation. Every composition is "musical," not by its explicable structure, or by its definite or indefinite suggestions of movement or of speech, or of any emotion extraneous to musical emotion, or in virtue of all these things together, but in virtue of certain "structural units" or individualised tone-sequences, that give a distinct pleasure comparable to no other. These may be more or less frequent with different composers, and may be interrupted by longer or shorter passages that only give vaguer effects, but it is in the power to create individual melodies that musical genius consists, and the power of musical appreciation is the power of enjoying these. The psychological difference between the vaguer effects due to superinduced associations and the simple and definite effect of individual melodies is brought out with abundant illustration in the first two essays of the volume ("Wagner and Wagnerism," "A Musical Crisis"). No theory, with the single exception of Darwin's "theory of the primeval use of music under conditions of sexual excitement," Mr. Gurney contends, as he had already contended in *The Power of Sound* and in his reply to Mr. Sully, comes anywhere near the explanation of the unique effect of music; and even this, perhaps, does not touch the central problem of the effect of "definite melodic forms" (p. 298). The two essays on Poetry ("Poets, Critics and Class-Lists," "The Appreciation of Poetry") are intended to show the desirability of allowing for the influence of personal idiosyncrasies on appreciation of different poets and of different kinds of poetry.

Hegelianism and Personality. By Andrew Seth, M.A., Professor of Logic, Rhetoric and Metaphysics in the University of St. Andrews. Second Series of "Balfour Philosophical Lectures, University of Edinburgh". Edinburgh and London: William Blackwood & Sons, 1887. Pp. xi., 230.

The newly-appointed St. Andrews professor's "Balfour Lectures," published under the title *Scottish Philosophy: A Comparison of the Scottish and German Answers to Hume* (see Mind xi. 120, 267), are now followed by a second series, issued in a form somewhat altered from that of their delivery last spring. The present subject was pointed at and to some extent had its way prepared in the first course of lectures. More generally phrased than in the title, it is an attempt "critically to test the Idealism reared upon Kant's foundation by his successors in Germany, and now represented in this country by a number of writers often classed together as Neo-Kantians or English Hegelians". Green is taken as protagonist among these latter, but it adds not a little to the interest of the undertaking and significance of the conclusion attained that the author himself has been no mean fighter in the ranks. It is for

the present only noted that the line of criticism lies through the following series of topics—Kant and Neo-Kantianism, Fichte, Relation of Hegel's Logic to Experience, Logic as Metaphysic (Thought and Reality), Hegel's Doctrine of God and Man, Hegelianism as an Absolute System. The conclusion may be gathered (provisionally) from the author's final words:—"The point of my criticism has been that in its execution Hegelianism breaks down, and ultimately sacrifices the best interests of humanity to a logical abstraction styled the Idea, in which both God and man disappear; nor are these interests better conserved by the Neo-Kantianism or Neo-Hegelianism which erects into a God the mere form of self-consciousness in general".

Myth, Ritual and Religion. By Andrew Lang. 2 Vols. London: Longmans, Green & Co., 1887. Pp. xvi., 340; vii., 373.

For a number of years past, Mr. Lang has been known as one of the most eager anthropological inquirers of the school of Mr. Tylor—'anthropological' in the sense of being concerned with any and every kind of human activity or product that can throw light on the mental condition of primitive man. His *Custom and Myth*, in 1884 (see Mind x. 141), included a number of previous contributions to periodical literature with other detached essays, all directed to this end of inquiry. Among other workers of the school, or again among classical scholars, his distinctive characteristic, perhaps, has been a disposition and an ability to search out the survivals of savage custom and ways of thinking in the civilised life of Greece; scholars in general being wont to idealise Hellenic culture as the pure antithesis of all 'barbarism,' and anthropologists in general being afraid (or not learned enough) to meddle with the question of its development. He now, in his present volume, essays a more systematic treatment of the thesis that savagery, as we have still the means of more or less directly studying it, supplies the clue to an understanding of the irrational element so strongly marked in the recorded beliefs and practices of Greek and other pagan civilisations. The myths and religious observances of Greece are those which the author treats with most authority, but he is able also, by reference to the work of other scholars, to extend his argument with good effect to the civilisation of Aryan India, Egypt and Mexico. The accounts of savage custom and belief, adduced for comparison, display a most varied reading. It is hardly necessary to add that the evidence is presented with much vivacity and literary skill; though somewhat more of order might have appeared in the general disposition of the argument. Before the author takes up with the different classes of Myths in detail—divided partly according to subject (Nature-Myths, Myths of the Origin of the World and of Man, Divine Myths, Heroic and Romantic Myths), partly according to racial or local distribution—four introductory chapters (pp. 1-121) deal (1) with Systems of Mythology, (2) with the Mental Condition of Savages. On the latter topic, the author has less that is new to offer; but as regards the former, though his historical sketch is somewhat jerky, he discovers most interesting anticipations of the method of comparative study not only in Fontenelle and other moderns but already in the *Præparatio Evangelica* of Eusebius. (By the way, on p. 16, Porphyry gets twice placed in odd priority to Plutarch.)

Handbook of the History of Philosophy. By Dr. Albert Stöckl. Part I. *Pre-Scholastic Philosophy.* Translated by T. A. Finlay, S.J., M.A., Fellow of the Royal University of Ireland; Professor of Mental Science, University College, Dublin. Dublin: M. H. Gill & Son, 1887. Pp. vii., 285.

Dr. Stöckl's activity as a historian of philosophy has taken form not only in the *Geschichte der neuern Philosophie* (1883), noticed in MIND ix. 158, and in the comprehensive *Gesch. der Phil. des Mittelalters* (1864-6), of which the other work was meant to be a continuation, but also in a general *Lehrbuch* dating from 1870. It is this manual, written for Catholic students, that is here (in the somewhat enlarged second edition of 1875) begun to be translated for behoof of English-speaking students of the same faith. His ecclesiastical point of view and religious purpose granted, nothing but praise is due to the author's work, so far as it may be judged from the present pt. i.; and it is not likely to prove inferior in the part that remains to be translated, beginning as that does with the Scholastic period, which commands his fullest sympathy and has been with him a special subject of research. Within the present part Christian philosophy already receives (in its Patristic phase) a comparatively extended treatment, occupying more than one-third of the volume and marked by a certain character of originality or independence; though, when he gets beyond St. Augustine, it is somewhat disappointing to find the author giving less than two pages to Cl. Mamertus, Boethius and Cassiodorus, with Isidore of Seville and Bede, while yet ascribing to them the merit, through three whole centuries which their names cover, of having "handed down the inheritance of learning and prepared the way for the new era—the middle ages"! Pre-Christian philosophy —represented as wholly the work of Greeks (after short reference to the thought of Eastern peoples)—is treated more upon the lines of other writers, especially Ueberweg, who is freely quoted. We have not the means of comparing the translation with the original, but it certainly reads remarkably well. It is a pity that the bibliographic references have not been brought down beyond the point at which they were left by the author in 1875, being given by him even then with little completeness. The translator might so easily have made improvements in this respect that the omission is not to be passed over—and the more as it may still be made good in the part to come. There is a want also thus far of any conspectus of the treatment (index, perhaps, is reserved). Otherwise, the volume is very well appointed.

Greek Life and Thought from the Age of Alexander to the Roman Conquest. By J. P. MAHAFFY, Fellow of Trinity College, Dublin, &c; Author of *Kant's Philosophy for English Readers, &c.* London: Macmillan & Co., 1887. Pp. xxxviii., 600.

There is interest in following Mr. Mahaffy into that line of historical inquiry for which he appears to have finally turned his back upon the old philosophical pursuits. His Commentary on Kant remains still a fragment (or set of fragments) after so many years, that it is upon the other line, if anywhere, that his present philosophical disposition may be guessed at; and the word "Thought" in the title of his new volume, absent from that of the earlier work *(Social Life in Greece from Homer to Menander)* which it continues, gives a suggestion of some means for the conjecture. Nor, in point of fact, though the word is taken to cover every kind of spiritual effort throughout the period, is the work of philosophers overlooked. It is not much that the author, in his now established character of man of the world writing about realities for other than "pedants," condescends to say of the philosophic schools in the 3rd century B.C.; but as these included Stoics and Epicureans, whose thought had a direct relation to practical life wanting in earlier speculation, he is able to say it in a chapter (pp. 130-50) on "The Serious Side of Greek Society—The Religion of the Day" with a kind of hearty

sympathy. The pages on Zeno in particular are very effectively written; nor is Epicurus, though more briefly disposed of, touched in any more grudging spirit. As to what is said of the changed character and influence of philosophical thinking between the 4th and 3rd centuries, it is only an exaggeration in Mr. Mahaffy's way of writing that has to be guarded against. In the text, too, the exaggeration never quite reaches the flood-mark of these sentences from the "Introduction":—"Above all, it should be insisted that the greatest practical inheritance the Greeks left in philosophy was not the splendour of Plato, or the vast erudition of Aristotle, but the practical systems of Zeno and Epicurus, and the scepticism of Pyrrho. In the Roman Empire, Platonists and Aristotelians were scarce; Stoics and Epicureans occupied all society. And if in the Middle Ages the schoolmen returned to the great classical masters, in our own day the world has again fallen into modern paths, and every man is either a Stoic, an Epicurean, or a Sceptic." The passage is not without its significance. There are, of course, a few Aristotelians and even Platonists still to the fore; but, putting aside that question of fact, it may be remarked how Mr. Mahaffy, probably in his haste, spoils what appears to be his general point by talking of "greatest *practical* inheritance,"—since it is hardly in relation to practice that Plato's "splendours" or Aristotle's "vast erudition" can be said to come into account; and, again, in the last sentence of the passage, "*modern* paths" is an expression that does not seem to be chosen with the due amount of care. Returning to the text, we may add that while much prominence is given, and with excellent effect, to the Hellenic culture developed within the period at Alexandria, Mr. Mahaffy unfortunately (p. 225 n.) considers himself precluded from referring to the great deeds there first achieved in mathematical science. Mathematics, it is true, "cannot be ranked as literature"; but the work of Euclid and his school was surely no small contribution to the "Greek Thought" of the time.

The Ethical Import of Darwinism. By Jacob Gould Schurman, M.A. (Lond.), D.Sc. (Edin.), Sage Professor of Philosophy in Cornell University. London: Williams & Norgate, 1888. Pp. xv., 264.

The author, who has already written on *Kantian Ethics and the Ethics of Evolution* (see Mind vii. 137), writes the present volume with the special object of distinguishing "between science and speculation in the application of Darwinism to morals". Chapter i. ("Methods of Ethics, Evolutionary and Other") contains a statement of his own view as to the possibility of ethical science. Ethics, he finds, "cannot claim to be a science of the same type as logic, without at least foregoing the problems which have hitherto constituted its principal subject-matter"; nor can it become a science of the type either of mathematics or of any branch of physical or natural science. "If it is ever to rise above the analytic procedure of logic, it can only be by becoming one of the historical sciences." "Some such ideal doubtless floated before the minds of those writers who saw in Ethics a comparative and evolutionary anatomy and physiology of morals; but the associations of natural history led them to substitute the whole extent and duration of organic life, which is essentially without moral character, for the narrow and brief history of mankind, in which alone moral phenomena are actually found" (p. 31). Since "the moral consciousness of the individual", "is but the reflex of particular social conditions," moral ideals and institutions must be studied first of all scientifically as parts of the historical evolution of societies. "Ethics, as the comparative history of universal morality, is

the vestibule to the temple of moral philosophy" (pp. 34-5). This historical science must not be mixed with "speculation". In order to exclude certain kinds of speculation that have intruded themselves into ethics, it is necessary to come to an "understanding with Darwinism". Let the truth both of the theory of evolution in general and of natural selection in particular be assumed, what consequences have they for ethics? Chapters ii. and iii. ("Evolutionism and Darwinism," "The Philosophical Interpretation of the Darwinian Hypothesis") prepare for the statement of this question, which is discussed in ch. iv. ("Darwinism and the Foundations of Morals"). The general conclusions are that although "Darwinism" has in fact been associated with a "mechanical philosophy," its "essential content" is "consistent with *any* philosophy" (p. 97), and that "evolutionism," in spite of the alliance into which it has been brought with hedonism, "does not necessitate, or even indicate, a new system of ethics" (p. 160). "Because natural selection presupposes a utility—a fittest that survives—the evolutionists have fallen into the fallacy of supposing that morality was *nothing but* a utility" (pp. 151-2). Morality is, certainly, useful, and would tend to be perpetuated for this reason; but this does not prove that its essence is utility, nor, consequently, that in essence it is derivative. Darwin's own "attempted derivation of the moral faculty" (ch. v., "The Ethical Speculations of Darwin") has "no connexion, either in matter or in method, with that biological science which is often designated Darwinism" (p. 181). Indirectly, however, in "casting about for supports to his more than dubious theory of conscience," he "suggested the way which a positive 'science' of ethics would have to follow". In ch. vi. ("The Development of Moral Ideals and Institutions, with special reference to the Family"), the author expounds and criticises the investigations of McLennan and Morgan. His conclusion is that "no light is thrown upon the study of morals by an appearance of deriving historic from prehistoric institutions". This appearance is deceptive, "simple facts" having been "obscured by overshadowing speculative theories". "It is not, therefore, with *theories* of the evolution of the family that moralists have to reckon. Like other phantasies and bold guesses, these may be passed by. But it is different with facts—actual observations made within the historical horizon. These have a vital interest for the moralist. And it is the merit of the evolutionist to have recognised their significance, though in general he managed to eviscerate it by adapting them to some extrancous speculation, cosmic or sociological" (pp. 241-2). The facts from history and savage life that show the variability of domestic institutions do not, however, confute intuitionism. The utilitarian is in the end obliged to agree with the intuitionist "*that* there are primal and underived moral principles". For by him also, "something at least is recognised as self-evident, primitive and inviolably obligatory—the welfare of mankind" (p. 253). And the fact of the historical growth of any particular system of moral relations does not prove that those relations in their present form are not ethically valid. "Science, indeed, can tell us nothing of the validity of virtue, duty or good" (p. 264). The book is dedicated to Dr. Martineau.

The Unseen World. An Address delivered before the Aristotelian Society, November 7, 1887 (being the annual Presidential Address for the Ninth Session of the Society). By Shadworth H. Hodgson, Hon. LL.D., Edinb., Hon. Fellow of C. C. C., Oxford, President. London: Williams & Norgate, 1887. Pp. 51.

In this Presidential Address the author brings to completion the

subject of the *Re-organisation of Philosophy* (dealt with in last year's address), "which, again, when completed, will be itself in some sort the completion of the larger question of the scope and method of Philosophy" to which the whole series of addresses has been devoted. The part of the whole subject here treated is that which belongs to "Rubric D, the Constructive Branch of Philosophy". Here all the facts that came under Rubrics A and B (or the reflective analysis of consciousness), and under Rubric C (or "the order of real conditioning" as ascertained by positive science, including psychology), have to be viewed together. For the third rubric, Matter is ultimately the only "real condition," the only "agency" that can be taken account of (cp. notice of last Address, MIND xii. 138). Matter, however, "in order of knowledge is a construction of experience, not a *datum* for construction". Nothing in the order of real conditioning is *causa sui*, "an absolute," or a "self-existent thing". And the universe itself as known philosophically is not *absolute* but *infinite*. Now, matter cannot be conceived as infinite in space and time, but only as indefinite. This anticipates the objection that matter, though not to be conceived as "technically self-existent," "may yet be held to be ultimate in such a way as to preclude the possibility of inquiry into its real conditions". Its "real conditions," then, remain to be sought in the infinite universe, with which it is not commensurate. Speculatively, nothing is known of these real conditions, that is, of the Unseen World, "beyond the fact that their real existence and operation, taken together as the object of a single idea, are commensurate with the largest sweep of our reflective knowledge of the infinite Universe". To learn more, we must make the transition from the speculative to the practical point of view. We must view ourselves as "conscious agents" choosing among actions and forming ideals. Now, the knowledge of how we ourselves *ought to act* implicitly tells us something of how the Infinite Existent acts, "seeing that its action is continued in our own" (p. 44). The final conclusion is that "the same Real Existent which we find at the beginning, as real condition of our positively known and positively knowable world, we find again at the end, that is, beyond but in the same direction as our highest and most remote ideal, and there also as a Real Existent whose nature and attributes are partially made known to us in that ideal, and which, so far as they are made known to us therein, is revealed to us as a Person" (p. 43). Our attitude towards "the object beyond our ideal" must be "an attitude of *Faith*, an attitude commanded by the moral law of our own conscious action, since it is essential to all conscious action to be characterised by forward-looking desire and choice of good. A practical knowledge of the Infinite Object beyond our ideal, and Faith in that same Object, are one and the same thing" (pp. 44-5). This conception is a philosophical rendering of the facts of the religious consciousness, "which have a separate form and expression of their own, quite independent of philosophy" (p. 46), being, indeed, a part of that "pre-philosophic experience" which is "at once the *explicandum* of philosophy, and, because its *explicandum*, also the means of controlling its results".

History of the Christian Philosophy of Religion from the Reformation to Kant. By BERNHARD PÜNJER. Translated from the German by W. HASTIE, B.D. With a Preface by ROBERT FLINT, D.D., LL.D., Professor of Divinity, University of Edinburgh. Edinburgh: T. & T. Clark, 1887. Pp. xix., 660.

This is a translation of the first volume of the late Dr. Pünjer's *Geschichte der christlichen Philosophie der Religion*. A translation of the second and

completing volume " is proceeding and will be published in a few months". Dr. Flint's preface gives some account of the author's life and commends the work to English readers,—although he thinks such commendation almost unnecessary, since its merits "are so great and obvious that they can hardly fail to be recognised by all who become acquainted with it". The following sentences explain the exact scope of the book, which, as Prof. Flint points out, is not precisely what would seem to be implied in the title. "It does not profess to be a Universal History of the Philosophy of Religion. . . . Pünjer warns us by his very title that he will confine his researches within the area of Christendom. On the other hand, his book is not merely a History of the Philosophy of the Christian Religion—a History of the Philosophy of Christianity. . . . He aimed at being the historian, not merely of the Philosophy of Christianity, but of the Philosophy of Religion, so far as it had sprung up on Christian soil and under Christian influences. The title of his work served to indicate his intention, and was thus far justified. Otherwise, however, it can hardly be deemed appropriate. Spinoza, the English Deists, Diderot and Voltaire cannot with propriety be held to have been Christian philosophers. . . . Further, although it is easy enough to understand how in a sense there may be a philosophy of Christianity, it is difficult to conceive of a distinctively Christian philosophy of religion. . . . Indeed, there are no traces either in the *Geschichte* or the *Grundriss* that Dr. Pünjer supposed that there was any exclusively and specifically Christian philosophy of religion. Hence the title of his work, although it served one important purpose, would seem to have been by no means a just expression even of his own thought." The *Grundriss* mentioned above is an unfinished critical volume (published under the editorship of Dr. Lipsius in 1886) in which the author purposed to set forth his own view on the chief questions with which a religious philosophy should deal. The present work is wholly expository. After an introductory survey treating of the Philosophy of Religion up to the Reformation (pp. 1-62), the rest of the volume (which is coincident with Book i.) falls into the following sections:—(1) The Beginnings of Independent Speculation, (2) The Doctrines of the Reformers, (3) The Cultivation of Philosophy before Descartes, (4) The Oppositional Movements within Protestantism, (5) The English Deism, (6) Descartes and Spinoza, (7) The 18th Century in France, (8) Leibniz and the German *Aufklärung*, (9) The Opposition to the *Aufklärung*.

Outlines of the Science of Jurisprudence. An introduction to the Systematic Study of Law. Translated and edited from the Juristic Encyclopædias of Puchta, Friedlaender, Falck and Ahrens. By W. Hastie, M.A. Edinburgh: T. and T. Clark, 1887. Pp. xliv., 282.

A translator of rare competence, Mr. Hastie is also so indefatigable as apparently to have determined not to rest till he has turned the fertilising stream of German thought upon every field of philosophical inquiry which his countrymen have been cultivating with modest means—and but moderate success. Beginning with philosophy of Art (according to Hegel, see Mind xi. 437), and having now also (as just seen) added philosophy of Religion, he follows up another earlier excursion into philosophy of Law (according to Kant, see Mind xii. 301) with the present series of translations from some of the foremost German jurists of this century; and, having done so much for the philosophical enlightenment of the legal English student, is even going presently to step down to a lower level and help him with a translation of Brunner's historical

account of the sources of English Law. The (philosophical) scope of the present volume may be sufficiently gathered from the titles of its five parts: (1) Outlines of Jurisprudence as the Science of Right; (2) System of Jurisprudence as a Scientific Organism; (3) The Scientific Study of Jurisprudence—its Preliminaries, Special Subjects, Means and Appliances; (4) Principles of Juristic Methodology; (5) Definition and History of Juristic Encyclopædia. One may have a less ardent belief than the translator in the theoretic validity or practical virtue of German *Naturrecht*, and yet give a warm welcome to this well-considered effort to broaden the intellectual view of students reared upon little more than Austin's *Lectures*. The editorial work of annotation—designed to bring the text into relation with the literature accessible to English students—is done throughout with intelligence and also impartiality; nor should the fluent argumentation of the translator's preface (pp. 7-37) fail of recognition.

Histoire de la Psychologie des Grecs. Par A.-Ed. Chaignet, Recteur de l'Académie de Poitiers, Correspondant de l'Institut. Tome I. *Histoire de la Psychologie des Grecs avant et après Aristote.* Paris: Hachette et Cie, 1887. Pp. xxii., 426.

M. Chaignet is a philosophical scholar who has been long at work and with much distinction, though no previous production of his has come under notice in these pages. One issued in 1884 we especially regret not to have seen—a comprehensive *Essai sur la Psychologie d'Aristote*, which was "crowned" by the Academy of Moral and Political Sciences. Among his earlier works, it may interest readers of Mind to note the following:—*La Philosophie de la Science de Langage* (1875); *Pythagore et la Philosophie pythagoricienne* (1873); *La Vie et les Écrits de Platon* (1871); *Vie de Socrate* (1866); *De la Psychologie de Platon* (1863); *Les Principes de la Science du Beau* (1860). Most of these also have received "Academic" recognition. The present work is issued of his own independent motion, but still has relation to the last of his officially distinguished works—the *Essay on Aristotle's Psychology*. This, in fact, is henceforth meant by the author to be read as the proper transition from the first to the second part of the volume now published; for, after adding to his account of Plato's psychology (pp. 203-46) a sketch of the doctrine as it was continued in the Old Academy (represented by Speusippus and Xenocrates), he passes here at once (p. 267) to the followers of Aristotle, beginning with Theophrastus. The account of these, ending with Strato (pp. 332-51), it should be noted, is broken by a short chapter (pp. 303-16) entitled "Le Pneuma". This is interesting in comparison with the (more developed) episode on that same topic which Prof. Siebeck in his *Geschichte der Psychologie* (see Mind x. 289) finds it necessary to introduce at about the same stage; and the more interesting, because M. Chaignet, though not unfamiliar with German philosophical literature, evidently knows nothing of his immediate predecessor in this historical field. At p. v. of his Preface, he expressly says that he is not aware that his subject has been treated by anyone, in or out of France, since the German F. A. Carus in 1808. It is a little disappointing, in these days of free international communication, to find that a work like Siebeck's, which as far back as 1880 had covered the ground as far as the Old Academy and four years later had advanced as far as Thomas Aquinas, should still in the present year not have come to the knowledge of so active-minded a scholar as M. Chaignet. If it had done so, he would probably not have thought it necessary to begin with so elaborate an apology for his enterprise as he offers in his Preface. That Preface, however, cer-

tainly gives him occasion for some very effective and interesting discussion on the relation necessarily subsisting between Psychology and Metaphysic. So far as we have been able to see, the treatment of his subject in the text falls at various points a good way short of his German rival's; yet the subject is one that needs all the illustration that either can bring to it. It should be added that in an Appendix, M. Chaignet gives first "The External History of the School of Aristotle" (pp. 353-70), then a "Table of the Peripatetic Scholarchs," and lastly at considerable length (pp. 374-424) a "Liste alphabétique raisonnée des Péripatéticiens du Lycée"—understanding this so widely as to include some account, longer or shorter, of all the more important Schoolmen. The present volume will be followed by one or more others, according as the author may have strength to continue a subject to which he has devoted many past years of study.

Victor Cousin. Par JULES SIMON de l'Académie Française, Secrétaire perpétuel de l'Académie des Sciences Morales et Politiques. Paris: Hachette et Cie, 1887. Pp. 184.

In distinction from M. Janet's monograph, noticed in MIND xii. 141, the purpose of which was to set forth the exact nature of Cousin's philosophical work, the present volume by M. Jules Simon (which is the first of a series entitled "Les Grands Écrivains Français") aims chiefly at giving a personal portrait of Cousin. The book is divided into the following chapters:—"La Biographie," "La Philosophie," "Le Régiment," "Les Batailles," "Les Amours,"—of which the second (pp. 30-75) is an exposition of Cousin's philosophical ideas, while the next two (pp. 76-159) deal with his administrative activity, and the last with his literary studies of the 17th century. The account of the philosophy, although brief, is sufficient to bring out its characteristic features, and the description of the state of philosophical instruction in France during Cousin's dominance, by the slight difference of its point of view, serves usefully to supplement M. Janet's. The chief divergence is that M. Simon insists more on the despotic character of Cousin's administration. No "system," he admits, was "imposed"; "il était seulement entendu qu'on enseignerait partout l'existence de Dieu, la providence, la spiritualité et l'immortalité de l'âme, le libre arbitre, le devoir. Si un professeur avait bronché sur un de ces points, à l'instant il aurait trouvé sur lui la main de M. Cousin" (p. 115). The general conclusion is that Cousin's great services were "of the political order". "Comme philosophe et chef d'école, M. Janet emploie tout son grand talent à le reconstruire, ce qu'il ne sera jamais nécessaire de faire pour Kant, Schelling ou Hegel. Mais il n'y a pas besoin d'efforts pour démontrer que Cousin a exercé sur la philosophie, sur l'enseignement et sur les lettres françaises la plus grande et la plus heureuse influence."

Pour l'Histoire de la Science Hellène. Par PAUL TANNERY. "De Thalès à Empédocle." Paris: F. Alcan, 1887. Pp. vii., 396.

This work is an interesting and important contribution to the history of the first period of Greek thought. Begun ten years since, and published by instalments in the *Revue Philosophique*, it now appears with many additions, including translations of the fragments of the philosophers and of the passages relating to them in the "Doxographers". By the term "Hellenic science," the author intends to convey, first, that he deals exclusively with the purely "Hellenic" period of Greek philosophy, and next, that he deals with it in its scientific rather than its metaphysical aspect. His work is thus "a sort of complement of

the history of the origins of philosophy". Of the sciences that can be said to have become more or less specialised in antiquity, medicine and geometry—the second of which the author has treated in a separate volume (*La Géométrie grecque, comment son Histoire nous est parvenue et ce que nous en savons*, 1887)—are left aside, and cosmology, general physics and astronomy principally dealt with. The author's method is to set forth first the detailed scientific doctrines of each thinker and thence ascend to the view of the whole, rather than to present first the general metaphysical idea and afterwards view the details in the light of this, as has been the custom with philosophic historians. By the use of this method he has purposed to bring out the resemblances rather than the differences between doctrines and to display the scientific progress made during the period rather than the evolution of metaphysical conceptions. What he finds is that, while on the whole some advance was made in detailed explanation, the greatest merit of each thinker of the first rank is to have put clearly some new question of general scientific speculation; and that the questions put by the Hellenic thinkers, after all the progress made in the meantime, still remain open for modern science, and may perhaps remain open indefinitely. The first two chapters, after an introduction (pp. 1-17), give preliminary expositions of the sources of the fragments (c. i. "Les Doxographes Grecs") and of what is known as to their chronology (c. ii. "La Chronologie des Physiologues"). The remaining chapters (ii.-xiii.) deal separately with the philosophers in the following order:—Thales, Anaximander, Xenophanes, Anaximenes, Heraclitus, Hippasus and Alcmaeon, Parmenides, Zeno, Melissus, Anaxagoras, Empedocles. This list differs from the list in the latest edition of Ritter and Preller's standard collection (see MIND xii. 310) chiefly by the absence of a special chapter on Pythagoras and the Pythagoreans and by the omission of the later *Physici* (Leucippus and Democritus, Diogenes of Apollonia, Archelaus and Hippo). Instead of the fragments being ordered according to topics, as in Ritter and Preller, an independent exposition of each system is first given, upon which follows in each case a literal translation first of the passages in the Doxographers and then of the original fragments, without note or comment. The author's investigations have led him to some new conclusions as to the rank to be assigned to different thinkers. Thales and Xenophanes, he holds, do not properly belong to the philosophic series; the former having merely introduced into Greece some rudimentary scientific notions that were already current in Egypt and the East, and the latter having been a "humoristic poet," who attacked the popular theology, rather than definitely a philosopher. The series of the Ionics begins with Anaximander, and the series of the Eleatics with Parmenides. Zeno and Melissus, on the other hand, have been allowed less than their due importance; the first being regarded chiefly as an ingenious dialectician, and the second as only a representative of Eleaticism who defended the doctrine of Parmenides without making any contribution of his own to its statement. The importance of Zeno has been underrated because his well-known arguments finally expelled from philosophy the notion they were intended to combat, which was in reality the Pythagorean notion of bodies as "sums of points"; the point being, for the Pythagoreans, "a real unity," and the whole, consequently, a real plurality. Zeno, in order to show that unity belongs to the whole and not to an indivisible minimum, proved that if the continuous consists of indivisible elements motion is impossible. The conception he attacked did not reappear in its original form. The Pythagorean school itself advanced to the more abstract view that had become necessary, and henceforth

regarded the point as having strictly no magnitude, and numbers as abstractions—not concrete elements of things. Hence arose the misunderstanding of Zeno's arguments, which now passed into the hands of the Sophists. The reconstruction that M. Tannery attempts of Zeno's whole argument on motion (pp. 253-60) may be compared with that which is attempted by M. Dunan from a different point of view (see MIND x. 307). The Eleatic school, M. Tannery contends, was not in its origin idealistic. The "being" of Parmenides is "extended substance," "the Cartesian matter". "Not-being" is empty space. What Parmenides affirms is "limited space filled with matter," or the Cartesian *plenum*. In this doctrine, though not itself idealistic, the basis was given for idealism, and Melissus drew the idealistic conclusion. The expressions of Parmenides that are usually taken for statements of idealism are not to be interpreted in the sense that "to think and to be are the same," but in the sense that "to be intelligible and to be are the same". The point of view of Parmenides remained throughout realistic. It was only when Melissus had laid down definitely the proposition that being is incorporeal (*ἓν δὲ ἐόν, δεῖ αὐτὸ σῶμα μὴ ἔχειν*) that idealism was "read into" Parmenides. Among the Ionics, the merit is assigned to Anaximander of having been the first to arrive at a solution of the question of the origin and end of the world that is identical in essence with Mr. Spencer's (p. 105), and, so far as can be seen, must continue indefinitely to be a possible solution. Anaximenes is found to have been the first to affirm with precision "the unity of matter, or rather of substance" (p. 158)—an affirmation which still remains for modern science "a postulate". The scientific problem raised by Heraclitus was that of the possibility of the coexistence of a general with an individual consciousness (p. 189). In the theory of the elements of matter, not only did the ancient philosophers think out the conceptions that science has worked with ever since, *viz.*, the doctrine of the four elements (first definitely stated by Empedocles and afterwards triumphant in its Aristotelian form), and the atomic doctrine that was ready to take its place when its utility was exhausted; but further, a conception was suggested by Anaxagoras which may find scientific application if ever the atomic doctrine should in turn be found to have rendered all the service it is capable of. The ultimate elements of Anaxagoras, according to M. Tannery, are not the *ὁμοιομερῆ* described by Aristotle, but are "qualitative" elements unattainable by any process of quantitative division. Matter is throughout, even to its smallest particles, "at once one and composite". This theory is identical with the theory of matter suggested by Kant (p. 286). The points of interpretation selected here for mention have been exclusively points of speculative interest. While dealing adequately with the general aspect of the scientific thinking of the *Physici*, the author has also successfully carried out his idea of writing a history in which the positive scientific progress made during the period should be described. There is only space left barely to mention the two Appendices, the first of which (pp. 341-68) is a translation of the treatise of Theophrastus on Sensation, the second (pp. 369-91) a contribution to the history of the Pythagorean arithmetic.

Les Sceptiques Grecs. Par VICTOR BROCHARD, Maître de Conférences suppléant à l'École Normale Supérieure. Ouvrage couronné par l'Académie des Sciences Morales et Politiques. (Prix Victor Cousin.) Paris: F. Alcan, 1887. Pp. 432.

This is in all respects an excellent history of Greek Scepticism. The Sceptics are dealt with in a spirit at once sympathetic and critical.

While there is much independence in the author's treatment, the statement of his views, where they are new, is accompanied by adequate discussion of those of his predecessors. The comparison of the position of the Sceptics with those of modern schools is always very good. The result of this comparison is well summarised in the "Conclusion" (pp. 393-430), which is of great interest in relation to the philosophy of science. Historically, the author contends, the Sceptics have contributed to the building-up of the structure of science of which they denied the possibility. They had themselves, in their final period, arrived at a doctrine anticipating modern theories of inductive logic; and if they did not call the object of their investigations "science" it was because, in common with their "dogmatic" opponents, they had too high a conception of scientific certitude. In order to justify itself against scepticism, modern science has had to renounce this conception, and to allow that volitional factors as well as pure intellect have their part in scientific constructions, which, besides, are only provisional. It was especially by insisting that the ideal set before themselves by the dogmatists had not been attained that the Sceptics contributed to scientific progress; for nothing could have been more fatal to any progressive science than acquiescence in a dogmatism such as that of the Stoics. The history of ancient Scepticism is divided into three periods: (1) the period of "moral" or "practical" scepticism, represented by Pyrrho, (2) the period of "dialectical" scepticism, represented by Ænesidemus, (3) the period, continuous with this in time and identical in the substance of its ideas but different in aim, of "empirical" scepticism, represented by those who combined the doctrines of the "empirical" school of medicine with philosophical scepticism. These three periods are treated in books i., iii. and iv. respectively. Interposed between books i. and iii. is an equally full history of the "mitigated scepticism" of the New Academy (bk. ii., pp. 93-225). The whole is preceded by an Introduction (pp. 1-33) on "The Antecedents of Scepticism". The New Academy, the author finds, notwithstanding its resemblance in doctrine, and its chronological position in the interval of time between earlier and later Pyrrhonism, was independent of Pyrrhonism in origin. The affinity of Pyrrhonism was with the doctrine of Democritus. The New Academy, on the other hand, was justified in its claim to represent the Old Academy by its use of the Platonic dialectic, by its idealistic tendency, displayed in its opposition to the materialism of the Stoics, and by its occupation with problems of psychology. In summing up their characteristics, the author expresses a very high opinion of the philosophers of the New Academy; describing them as "the most liberal and moderate spirits of their time". Pyrrhonism he traces back to the conflict of the results of the pre-Socratic philosophies, and to the apparent hoplessness of arriving at any certain conclusion by means of dialectics. Although the sceptical consequences of the dialectic of the Eleatics had been already perceived to a certain extent, the philosophy of Pyrrho was in effect "a new beginning". Pyrrho himself, however, while he introduced a new theory into philosophy, was a moralist rather than a dialectician. His scepticism was a reaction against dialectics, not, like the scepticism of the New Academy, a refinement on contemporary dialectics. The doctrine of Pyrrho, regarded as a whole, is a product of Greek and Oriental influences. It combines "Greek wisdom" with "Oriental indifference". To form an exact idea of Pyrrho, it is necessary to study his biography. He was in reality "a Greek ascetic," "a kind of saint under whose patronage scepticism placed itself," even more than he was the founder of a philosophic

school. After the period of Pyrrho and his immediate disciples, the school ceased for a time to have a separate existence. When it reappears, it is a school of "dialectical," no longer of "practical" scepticism. With Pyrrho and his immediate disciples indifference was the end, suspension of judgment only the means. With the later Sceptics dialectic was the essential thing, and indifference—or rather *ἀταραξία*—only the accessory. The later Sceptics did not willingly deal with moral questions, feeling that here was the "Achilles' heel" of their doctrine. Ænesidemus, who "renewed scepticism," was essentially a metaphysician, and one of the greatest of metaphysicians—a thinker comparable to Hume and Kant. The Sceptics of the last period, represented by Sextus Empiricus, were not metaphysicians, like the Sceptics of the second period, any more than they were philosophical moralists, like the Sceptics of the first period. While they opposed dogmatism by all the weapons with which their predecessors had supplied them, their aim was constructive; and the constructive part of their doctrine was a kind of "practical art," founded on observation and experiment. Their "doubt," like that of the Sceptics of all periods, including the New Academics, stopped short of phenomena. Where they differed from the Sceptics of the preceding periods was in their systematic effort to construct what we should now call a "science of phenomena". In the view of the ancients, however, "science" was impossible without certitude as to "essences and causes". Hence, while the empirical Sceptics only attacked what we should call "metaphysics," they were obliged to proclaim the impossibility of "science". "Their doctrine is a Positivism that has not found its formula." Like the positivists they are utilitarians, and like the positivists also they have the idea—now generally accepted, and long since realised practically—of the independence of the sciences with regard to metaphysics. The difference is that what the moderns call "science" they call "practical art". The reason why their idea of experimental method remained only a sketch was that they applied it first to the complex phenomena that are the subject of medicine, instead of to the simpler phenomena of inorganic nature. When all is said, however, there is still, between the scepticism of antiquity and the science of to-day, "an abyss" (pp. 416-7).

La Morale des Stoïciens. Par Mme. Jules Favre (née Velten). Paris: F. Alcan, 1888. Pp. ix., 382.

The purpose of this volume is not to set forth the ethical doctrine of the Stoics on its philosophical side, but to make plain the essentially practicable character of their morality itself; to show that the isolated paradoxes that are often taken for its typical expression do not constitute its substance, but that, in the author's words, the Stoics "comprehended and respected human nature". Translations of passages selected principally from Seneca, Epictetus and Marcus Aurelius are arranged under appropriate headings and prefaced by short accounts of the attitude of Stoicism on each point. The general division of the subject-matter is as follows:—Part i., "God. The Soul. Relations of the Soul with God." Part ii., "Moral Culture and Means of Culture". Part iii., "Duties of Man towards his Fellows". Part iv., "Women and Stoicism. The Education of the Stoics." The extracts are well selected and arranged, and, together with the general exposition, give a good view of the Stoic morality in its application to daily life and conduct.

La Psychologie Physiologique. Par G. Sergi, Professeur d'Anthropologie à l'Université de Rome. Traduit de l'Italien par M. Mouton,

Professeur de Philosophie au Collège d'Armentières. Edition Française, revue, corrigée et augmentée par l'Auteur. Avec 40 figures dans le texte. Paris: F. Alcan, 1888. Pp. iii., 452.

This is a French translation of a systematic treatise on psychology—entitled, in the Italian edition, *Elements of Psychology* (1879)—in which Prof. Sergi had already taken up the scientific positions developed in a more popular manner in his *Physiological Theory of Perception* and *Origin of Psychical Phenomena* (noticed respectively in MIND vii. 154 and x. 474). He has made many modifications and corrections for the present translation, which may therefore be regarded as a second edition of the work. The treatise is divided into five books. Of these, bk. i. deals, in order, with Physiological Elements (the functions of muscles and nerves) and Elements of Sensibility; bk. ii. with the Functions of the Nervous Centres, the Process of Ideation, Thought, Development of Perceptivity, Ideas, Reason, Perception of Space, Idea of Space, and Perception of Time; bk. iii. with Consciousness, Association and Contrast of Perceptions, Reproduction of Perceptions, Measurement of Psychical Acts, Unconsciousness of the Central Psychical Processes. In bk. iv. the Emotions (divided into Individual, Individuo-Social, Social and Æsthetic), and in bk. v. Reflex and Instinctive Movements, Expression of the Emotions, and Volition, are dealt with. The last two chapters of the last book (cc. 6 and 7), on "Determinism and Indeterminism" and "Imputability and Responsibility," contain a brief defence of determinism.

Des Définitions Géométriques et des Définitions Empiriques. Par LOUIS LIARD. Nouvelle Edition. Paris: F. Alcan, 1888. Pp. 179.

The object of this book (first published in 1873) is to determine the nature of the definitions of geometry and of natural science respectively. After an introduction on "Definition in General" it is divided into the following chapters:—i., ii. "Origin of Geometrical Notions," iii. "Characters of Geometrical Definitions," iv. "*Rôle* of Definitions in Geometrical Demonstration," v. "Hierarchy of Empirical Characters," vi. "*A Priori* Principle of Classification," vii. "Characters of Empirical Definitions," viii. "Conclusion". The general result is that both "geometrical definitions" and "empirical definitions" have an element of "matter" and an element of "form". In geometry, matter is the principle of "community" and form the principle of "specification," while in empirical science the reverse is the case. "Form, in geometry, is the work of the mind. Homogeneous space indifferent to all determination is given to us; we apply the real unity of thought to this virtual and indeterminate multiplicity, and from that union result notions at the same time one and multiple." The intermediary between space and the mind is motion, by which specific limits are imposed on indeterminate space. It is the mind also that gives form to empirical notions: but here form is a principle of community and no longer of diversity; the "specification" is given by the qualities that experience reveals. "Consequently, whilst in geometry form is a principle of unity and of diversity, it is, in empirical notions, a principle of unity and of community." In geometry, therefore, we have "definition by generation" or "formal definition," in empirical science "definition by composition" or "material definition". The formal definition is *a priori* and the material definition *a posteriori;* the first is "synthetic" and the second "analytic". The first also is "definitive" and the second "provisional". "Finally, geometrical definitions are principles of knowledge; empirical definitions are only *résumés*." In the history of geometrical science they come at the beginning, in the history of empirical science at the end.

De l'Absolu, La Loi de Vie. Par Olivier de Sanderval. Paris: F. Alcan, 1887. Pp. xix., 211.

The unknowable Absolute is the principle of things. Transformation, Motion, or the Relative, has both its origin and its end in the Absolute. It manifests itself by a "struggle," which is subject to a law, "the law of life," known only by its "effects," or by its "work," which is the universe. Observation of the action of the law of life shows that "progress," or continuous movement in a single direction, is "the form of the relative," that "good is the form of progress," and that "happiness is the form of good". Human consciousness is the last stage of progress hitherto reached, but it is not the final stage. The beginning of the universal movement is a state in which all things exist in potency, and its end is "the re-formed Absolute". Not this unattainable end, however, but the movement towards it, interests us ethically. On the whole, M. de Sanderval's conclusions, while less systematised, present a remarkable resemblance to those arrived at from a Kantian point of view in the work, *Die drei metaphysischen Fragen, &c.*, by F. V. von Wasserschleben, noticed in Mind xii. 629.

Essai sur la Philosophie de Duns Scot. Par E. Pluzanski, Docteur ès Lettres, Professeur agrégé de Philosophie au Lycée de Rennes. Paris: E. Thorin, 1887. Pp. 296.

The purpose of this very thorough monograph is not entirely historical, but is partly to rehabilitate the *Doctor Subtilis* in view of contemporary Neo-Scholasticism, which, the author thinks, is too exclusively Thomist. The Church, he points out, has never disavowed Duns Scotus, and Suarez, while constantly bringing face to face Scotist and Thomist opinions, sometimes inclines to the former (p. 8). The work is divided into the following chapters:—i. "Life and Writings of Duns Scotus," ii. "On the general idea of Philosophy according to Duns Scotus," iii. "Theory of Knowledge," iv. "The Will, Free-Will and Sin," v. "On the Soul," vi. "Proofs of the Existence of God—On the idea of Infinite Being," vii. "On the Simplicity of God," viii. "On the relations of God with other beings," ix. "Kinds, the Individual, First Matter," x. "The Principles of Morals," xi. "*Résumé* of the Philosophy of Duns Scotus". There follows a "bibliographical notice" (pp. 287-91). The author strives to show, especially in discussing the theory of "first matter," that there is no inlet for pantheism in the system of Duns Scotus, or at least not more than in that of Aquinas (p. 262). Up to a certain point, his metaphysical doctrine, with the position assigned in it to will, may be opposed with profit to the excesses of "intellectualism"; but in his moral doctrine, with its arbitrary character, he is decidedly inferior to St. Thomas, both as regards the principles of morals and also as regards practical questions (p. 280).

Die Vorstellung des Dinges auf Grund der Erfahrung. Ein Entwurf von Dr. Theodor Loewy. Leipzig: C. Reissner, 1887. Pp. 275.

The author's essay on *Common Sensibles* was noticed in Mind ix. 317. His present larger volume is marked by the same effort to carry out with independence the psychological method of English philosophy. The problem he here deals with is that of "the representation of things" or "objects". This problem is treated almost entirely on its psychological side, though at the end there is some discussion, on the lines of Locke and Hume, of the conception of "substance". The essay is, as a whole, a consistent attempt to describe the psychological formation of concrete ideas entirely in terms of mental "contents"; organic condi-

tions being expressed as "accompanying phenomena" (Begleiterscheinungen). The principle of the classification of "contents" among the special senses, for example, is thus stated:—"Contents belong to one and the same group when it is demonstrable that determinate contents are always present which accompany them, and which are absent when those are absent" (p. 18). The book is divided into the following sections:—(1) Contents and their Classification; (2) Extension; (3) Depth; (4) Magnitude; (5) Motion; (6) Time; (7) Velocity; (8) The Union of Contents; (9) Contents and the Body; (10) Consciousness. As an example of the author's manner, his discussion of Berkeley's view as to the relations of "visible objects" and "tangible objects" (section iv.) may be cited. Against Berkeley, he contends that instead of a "visible object" having no "fixed and determinate greatness," it is in reality just as much determinate as the "tangible object," for the reason that "every seen magnitude is a determinate magnitude and a determinate visible object, and for one tangible object there are many different determinate visible objects, not merely one visible object for every tangible object, as Berkeley supposes" (when, for example, he says that "tangible and visible magnitude do in truth belong to *two* distinct objects," *Theory of Vision*, § 55). The content called the "tangible object" may be united with any single "visible object"; but one particular visible object—"the magnitude given at the distance of clearest vision"—comes to take the place of all the rest, as being the "visible magnitude to which every magnitude leads". "We may then call the largest and most distinct visible shape, together with the accompanying tangible contents, the visible and tangible shape of an object, whereby under the name of 'object' nothing further than the sum of these tangible and visible contents is to be understood,—the latter, however, as conjoined with those that follow at the different distances, since the contents of one distance serve as signs of every other, and these altogether are determinate." Attention may be drawn to a discussion, in the later chapters, of the "place" of visual and non-visual contents in relation to one another, and of contents generally in relation to the mind. The author insists on the peculiarity of psychological relations of union between different kinds of "content". There can be no space-relations, he points out, between contents of different senses, and "contents" are neither "outside the mind" nor "in the mind". If we here apply space-relations at all, it might equally be said that "the mind" is "in its contents". Whether we are speaking of the union of the contents of different senses or of the union of contents generally in the mind, it always remains true that "outside the given contents and their succession nothing is given".

Grundriss der Psychologie. Von Dr. F. Wollny. Leipzig: Theodor Thomas, 1887. Pp. v., 121.

This volume has the interest of being an essay in purely introspective psychology by a materialist. And the author not only proceeds in fact by the introspective method, but regards it as the only possible method. "What consciousness is," he says, "only immediate experience of its own states can teach," and there is nothing else by which we can define it (p. 8). Its organic conditions can only be described at present in the most general way, and further knowledge of them is of less concern to us than knowledge of the facts of consciousness. Consciousness, however, consists of a series of fluctuating states, to which in themselves no permanence can be ascribed. It is, accordingly, a secondary phenomenon, and its origin must be traced to that which is permanent, *viz.*,

matter. The states that constitute each individual consciousness have their cause in the organism as affected by external objects. Without an organism and objects external to it there can be no consciousness; and consciousness originates, as is obvious in the case of each individual life, in an organism that is at first not conscious, while, again, its higher states arise out of its lower ones. Accordingly, there can be no world-consciousness; for there are no objects external to the world by which such a consciousness could be determined: nor can there be any "intellectual intuition" such as Kant tried to make conceivable; for this is inconsistent with the origin of consciousness in "non-consciousness" and of all higher mental processes in sense. As admitting neither a superhuman "intellectual intuition" nor a "world-soul," the author finds himself compelled to reject both theism and pantheism (identified by him with the doctrine of a world-soul); and, in his preface, he declares himself an "atheist". On the other hand, he finds that Kant, in limiting knowledge to phenomena, failed to arrive at the true conclusion as regards the real world, that its parts are infinitely divisible and that its extension is infinite. When this conclusion is reached, the knowledge that immeasurable existence is a power superior to all thought tranquillises individual desires, and has the effect of a religion in so far as it makes each man feel that he is in his natural place as a "free member of the universe" (pp. 102-3).

Treu und Frei. Gesammelte Reden und Vorträge über Juden und Judenthum von Prof. Dr. M. Lazarus. Leipzig: C. F. Winter, 1887. Pp. vi., 355.

These addresses by Prof. Lazarus on Jewish subjects are of very varied interest, and fulfil exactly the author's purpose of giving a picture of the intellectual and public life of the Jews in Germany during the present century. The author himself is an adherent of liberal Judaism in religion, and many of the addresses deal with questions of religious reform. The most directly philosophical are perhaps the two on Moses Mendelssohn (delivered in 1886 on the occasion of the centenary of his death), but the influence of the philosophical point of view is visible everywhere. As readers of Mind may infer from what has been set forth of the author's work in former notices, his treatment of questions of race and nationality is of special interest. The second address, entitled "What is a Nation?" ("Was heisst National?"), and delivered in 1879, could not have proceeded from anyone but a psychologist who had made a special study of linguistics. By his conception of "the common mind" in its relation to language, Prof. Lazarus is led to regard national types as formed by common influences conveyed through institutions, and especially through literature, and as only determined to a minor extent by physical heredity. The Jews, he holds, have no longer a separate "nationality," although in consequence of their race they form an element with an individual character in each of the nations under whose institutions they have grown up, and by whose literature they have been nourished. And as they are not separate because of their common descent, so they are not separate because of their common religion. Divisions of race and religion are not by themselves sufficient to make a division of nationalities. The circumstance that this doctrine is enforced in view of the anti-Semitic agitation in Germany does not diminish its philosophical interest. The two addresses on Moses Mendelssohn, already referred to, deal with his relations both to contemporary Judaism and to the German Enlightenment. In the second of the two there is an especially noteworthy passage on the intellectual relations of the Jews to the Middle Age and afterwards to modern European culture (pp. 210-12).

Kant's Systematik als systembildender Factor. Von Dr. Erich Adickes. Berlin: Mayer & Müller, 1887. Pp. viii., 174.

The author's task is to separate the imperishable from the perishable part of Kant. The perishable part he finds to be all that depends on the "external systematic form"; Kant's predilection for system having caused him to place many of his thoughts out of their true order for the sake of symmetry, and even to introduce entirely new thoughts for the sake of filling up the form he had once chosen. Dr. Adickes accordingly proceeds to rearrange the displaced thoughts in their true order and to remove altogether the thoughts that are not truly Kant's, but are there entirely through the exigencies of the system. Having thus, in the case of each of the chief works, "made the modifications effected by the external form harmless," he has next to "shape anew the contents of the particular writings from within outwards". This double service he proceeds to perform for the *Kritik der reinen Vernunft*, *Metaphysische Anfangsgründe der Naturwissenschaft*, *Grundlegung zur Metaphysik der Sitten*, *Kritik der praktischen Vernunft* and *Kritik der Urtheilskraft*. In the case of the other writings, the modifications produced by the external form are, he thinks, unessential.

Die drei Fragen Kants. Von Dr. H. Romundt. Berlin: Nicolaische Verlags-Buchhandlung (R. Stricker), 1887. Pp. 64.

Dr. Romundt's previous expositions of Kant have been noticed in Mind x. 626, xi. 134, 590. He here discusses Kant's three questions—"What can I know?" "What ought I to do?" "What may I hope?" The sum of his argument is that Kant has completed Luther's work as a Church reformer. The Church is to be regarded as "a means to the realisation of perfect good".

Begriff und Sitz der Seele. Von Dr. Eugen von Schmidt, Mitglied der psychologischen Gesellschaft an der Universität zu Moskau. Heidelberg: G. Weiss, 1887. Pp. iv., 76.

This is a discussion, from a basis of wide knowledge of what has already been thought and written, on the problems of "The Conception and Seat of the Soul". As regards the first problem, the author's conclusion is that "neither Materialism, nor Dualism, nor Sensualism (*e.g.*, with the capacity of feeling as general property of matter) is scientifically satisfactory, but only a monistic Spiritualism". The more distinctive part of the essay is that which concerns the second problem. Here the author arrives at the conclusion that the seat of the soul must be somewhere in the part of the *medulla oblongata* called by Flourens "le nœud de la vie," and that it must be a mathematical point, not varying from moment to moment, but fixed. This point is the centre from which proceed influences that maintain the life of the body. It is also the central point of feeling, thought and will. As the life of the individual ends at a particular moment of time, so it vanishes out of this particular point of space. In a chapter on "Consequences for Personal Immortality" (pp. 36-9), the author develops a theory of the "involution" of the "personal," or completely centralised, soul of man at the moment of death, and its new evolution in another part of the universe under new physical conditions. Side by side with this speculation he places the theory that "the world in the most general sense (the Macrocosm) is the self-development of the infinite Spirit" (p. 38).

Versuch nach einer zusammenfassenden Darstellung der Pädagogischen Ansichten John Locke's in ihrem Zusammenhange mit seinem philosophischen System. Von J. Gavanescul. Berlin: G. Schade (O. Francke), 1887. Pp. 84.

The author, a Roumanian by birth, has just taken his Doctor's degree at Berlin with this essay as his inaugural dissertation. Notwithstanding all that has been written on Locke, it was a piece of work remaining to be done—to bring his educational doctrine into relation (not always obvious) with his underlying philosophical theory. At the same time the author, whose main interest is after all pædagogical, has been able, by careful study of the *Conduct of the Understanding*, the *Treatises of Government*, and the *Letters on Toleration*, as well as of the fundamental *Essay*, to add not a few other "Thoughts" of Locke's "upon Education" to those set down, without too much system, in the famous treatise of that name. He also throws not a little light upon particular points of Locke's doctrine by a number of suggestive historical references earlier and later. Among his Berlin teachers, the author singles out Prof. v. Giżycki as the one to whose friendly counsel he has been most beholden, and his excellent and exhaustive treatment of the subject is doubtless not a little due to the stimulus received from that expert in all that pertains to the history of English thought.

(1) *Locke's Verhältniss zu Descartes.* Eine von der philosophischen Fakultät der Berliner Universität am 3 VIII. 1886 gekrönte Preisschrift von Robert Sommer, Dr. phil., Cand. Med. Berlin: Mayer u. Müller, 1887. Pp. 63.

(2) *Ueber die Abhängigkeit Locke's von Descartes.* Eine philosophiegeschichtliche Studie von Dr. Georg Geil, Strassburg: J. H. Ed. Heitz (Heitz u. Mündel Nachfolger), 1887. Pp. 99.

(3) *John Locke's Lehre von den Vorstellungen, aus dem Essay concerning Human Understanding zusammengestellt u. untersucht* von Dr. Eduard Martinak, wirkl. Gymnasiallehrers am Landesgymnasium Leoben. Gräz: Leuschner u. Lubensky, 1887. Pp. 35.

(4) *Die Voraussetzungen welche den Empirismus Locke's, Berkeley's u. Hume's zum Idealismus führten.* Inaugural-Dissertation &c. zu Berlin. Von Johannes Raffel. Berlin: Mayer u. Müller, 1887. Pp. 46.

These four memoirs may be taken together as showing, with the dissertation just noticed, how great and widespread the interest in Locke's philosophy has again become in Germany, after a century's intermission. (1) and (2) are each concerned with the question of its relation to the foregone philosophy of Descartes, and they come, after careful inquiry over the whole field, to practically the same conclusion—which is the one common to all those who have ever before investigated the question without prejudice. This is, that the relation, however unavowed, is a very close and intimate one indeed—closer in some respects of first importance than any that can be traced between Locke and either of his great English predecessors. Neither essayist overlooks this latter aspect of the question, and both therefore dissent emphatically from the usual German view that modern philosophy falls at once and naturally into two diverse currents—from Bacon through Hobbes and Locke to Hume, and from Descartes through Spinoza and Leibniz to Wolff—which Kant first succeeds in bringing together. Of the two, Dr. Geil, though his materials throughout are more crudely presented, pays the greater attention to the question of the English succession; but this does not keep him from making, at p. 97, the curious slip of representing Lewes as having declared the opinion that Hobbes had never read Locke ("dass Hobbes *den* Locke nie gelesen habe")!

In (3), Dr. Martinak confines himself for the present to a detailed

appreciation of the *logical* import of Locke's doctrine of Ideas, leaving over the doctrine of Judgment. The inquiry (which is much more detailed than the number of pages would suggest, these being large and closely printed) leaves him full of admiration that Locke should have been able to elaborate a doctrine at once so comprehensive and so profound.

The author of (4) is a not less careful student of the English masters, though his object is to use their shortcomings to point a moral against the Experientialism of the present day. In this view it is of interest to note that for Hume he works upon Green's edition, at least as regards that division of the *Human Nature* which is bound up with the now celebrated 'General Introduction' in vol. i.

Gemeinschaft und Gesellschaft. Abhandlung des Communismus und des Socialismus als Empirischer Culturformen. Von FERDINAND TOENNIES. Leipzig: Fues's Verlag (R. Reisland), 1887. Pp. xxx., 294.

Striking as the title of this work is, it fails to suggest what an amount of hard general thinking, both psychological and philosophical, is involved in the author's inquiry. He first took up his theme—the position of the Individual between the Communism proved to have been the human manner of life in the far past and the Socialism destined to come in the future—on seeking to qualify for the *facultas docendi* at Kiel in 1881; and since then all his studies, philosophical as well as more specially sociological, have been directed to its farther elaboration. In the general spirit of Spinoza—but a Spinoza re-incarnated as Schopenhauer with all the added insight of a century and a half of philosophical development—he aims at finding a rational interpretation of the huge mass of facts that have been established by modern inquirers regarding the prehistoric condition and the historic evolution of mankind. This he does in three parts: the first (pp. 1-96) giving his detailed theory of "Community" and of "Society" in their opposition to (or distinction from) one another; the second (pp. 97-194), under the general title "Wesenwille u. Willkür," affording a detailed psychological view of the various forms of human Will, with illustration of the difference between universal *nisus* and developed volition, and survey of their empirical outcome in the life of men; the third (pp. 195-274) tracing out the first lines of a doctrine of Natural Right; whereupon follows (pp. 275-94) a concluding section of "Result and Outlook". Throughout the treatise the influence of English writers—more especially Sir Henry Maine, with Mr. Spencer—upon the author is well marked, as might be expected of one who has before given proof of such intimate knowledge of Hobbes, the father of English publicists. On another occasion, it is hoped that Critical Notice of this important work may follow.

RECEIVED also:

Faith and Conduct, Lond., Macmillan, pp. xiv., 387.
W. Munk, *Euthanasia*, Lond., Longmans, pp. viii., 105.
G. J. Romanes, *L'Intelligence des Animaux*, 2 Tomes, Paris, F. Alcan, pp. xl., 230; 254.
C. Secrétan, *La Civilisation et la Croyance*, F. Alcan, pp. 474.
A. V. de Lima, *L'Homme selon le Transformisme*, F. Alcan, pp. 211.

(*Continued* on p. 152.)

VIII.—NOTES.

HEGEL'S CORRESPONDENCE.

Herr Hegel's edition of his father's correspondence (see MIND xii. 474) adds a large proportion of hitherto unpublished letters, both by and to Hegel, to those which, having been printed in the *Vermischte Schriften* and in Rosenkranz's biography, are here republished in chronological order and with the advantages of good type and paper. The collection now before us contains, so far as I am aware, the finest and most characteristic of Hegel's letters; and though not absolutely complete—some letters which have been printed elsewhere being merely referred to—enables us to follow the great philosopher pretty continuously from his boyhood to his death. By help of prefatory notes to the three divisions of the work, and of occasional explanations prefixed to particular letters, the correspondence has been made quite intelligible without the use of a detailed biography. The picture put before us is that of a life immersed in the interests of a professional teacher, of a lover of art, of a friend, husband and father. The correspondence is not primarily a record of an intellectual development; and the spirit which prompted the volcanic outpourings of the early letters to Schelling appears throughout the later life chiefly in the grim humour of the foe to all unreason, and in an occasional eloquent declaration of his faith in culture and in the march of time. It is chiefly, I think, in these "purple patches" that the reader not previously acquainted with Hegel may find something attractive; but anyone who cares to see at work the actual struggles which confirm a philosopher's creed will forgive, for example, the dry detail of the educational conflict in Bavaria (Letters to Niethammer, *passim*) for the insight which it affords into Hegel's real working faith in the rational spirit of the community as the one sacred thing.

Before passing to the letters which appear now for the first time, I may observe that many of the old letters are of extreme interest, and are probably more accessible here than in the *Vermischte Schriften* or in Rosenkranz. Such is No. 3 (I refer to the letters by the numbers attached to them in the collection) to Schelling, revealing the enthusiasm for reason and freedom which animated Hegel at 25, and furnishing, in my opinion, a key to the interpretation of much in his later writings. It is this letter to which Prof. Wallace (in *Encyclopædia Britannica*, article "Hegel") refers as ending with the sentence, "Our war-cry shall be Reason and Freedom, and our rallying-point the invisible Church!" No. 4 is a letter to Schelling in the same spirit. The letters to Sinclair and Duboc, Nos. 117 and 191, are of interest as private letters on philosophical subjects—rare in Hegel's later years. The three sets of letters to his wife written on the tours to Vienna, the Netherlands, and Paris, show Hegel as a happy art- and music-loving tourist. "I shall not leave Vienna," he writes, "as long as I have money enough for a seat at the Italian opera besides my journey home." All these letters had been published before, wholly or in extracts, but of course are better read here, complete, and in their chronological order.

In the new letters I note the following among the main points of interest.

1. Five hitherto unpublished letters from Hegel to Schelling, the last, No. 32 (from Bamberg, May, 1807), being according to the editor's

note that which on Hegel's side ended the correspondence. It promises Schelling a copy of the *Phänomenologie*, which had just appeared. The editor tells us that Schelling did not reply till November, and had then only read the preface. I do not, however, feel sure from Hegel's letter how soon Schelling may have received his copy of the book. This letter of Hegel's and the previous one to Schelling (No. 30, from Jena, February, 1807) contain references to experiments about "Siderismus," apparently some sympathy or *rapport* between human instinct and inanimate matter (cp. *Philosophie des Geistes*, § 392). Hegel could himself make little or nothing of the pendulum-experiments (swinging a ring by a thread against a glass to tell the time, &c.), but ascribed this, with unfortunate humility, to his unsteadiness of hand. Probably he was more cautious than the other experimenters in not allowing his expectation to influence him. I extract a few lines which contain the germ of the long passage *Philosophie des Geistes*, § 406 (see especially on pendulum and divining rod, *ib.*, p. 171); his view in the treatise is more definitely rational than in the letter, although *touched* with superstition:—"The relation which we have in Animal Magnetism in its most marvellous form, the fusion of personalities whereby the one is depressed into an accident of the other, in the sphere of nature—for in the sphere of mind this phenomenon is familiar enough—this relation descends in 'Siderismus' to the so-called inorganic world, and particularises itself as a magical union and sympathy of higher and lower natures" (i. 102). No. 12 (a note to Schelling) is amusing. Goethe could not come to Jena "because of a moon-rainbow and other marvellous things that had to be put on the stage in *William Tell*".

On Hegel and Schelling there is an interesting note in Appendix 2, with a letter of Cousin's to Schelling dated 1829, the most important of Cousin's letters in this collection, in which, as a common friend, he points out to Schelling with a pleasant courtesy that he cannot permit unkind expressions about Hegel to be addressed to him. This letter is from Schelling's *Nachlass*. I infer from the mode of its introduction that it has not been published before. The editor's note brings down the curious history of the change in Cousin's opinion of Hegel to a later point than Rosenkranz (370 ff.) by quoting Cousin's article in the *Revue des deux Mondes*, 1866, in which Cousin refers with disapproval to a saying of Hegel's on their return from Paris together in 1827. When they saw the sellers of consecrated medals and images before the door of Cologne Cathedral, Hegel exclaimed angrily: "There is your Catholic religion with its scandals: Shall I die before I have seen an end of all that!" Cousin contrasts this with the "loftier" views of Schelling's later years.

2. Hegel's relation with Van Ghert, an official under the government of the Netherlands, is mentioned, and the letter from Van Ghert (No. 74 in this collection) is printed in Rosenkranz's biography. But the editor has prefixed to the letter, here republished, a succinct statement of the fortunes and fall of Van Ghert's attempt to provide a liberal education for the clergy. (I speak simply from the statement as here given, which I have not the historical knowledge to criticise.) A letter to Hegel from Seber, a professor at the philosophical college established by Van Ghert at Louvain (No. 220), seems of value as giving a definite account of this short-lived institution.

3. The correspondence with Niethammer, who was officially concerned in the reorganisation of education in Bavaria while Hegel was head of a school at Nuremberg, deals with Hegel's private difficulties, and also with the interests of liberal education generally. It contains

some of Hegel's most humorous and some of his finest writing. I give two extracts. Niethammer had announced to Hegel a mortifying repulse which he had received on a matter essential, in his opinion, to liberal education. (I am obliged to paraphrase and omit, as some allusions and puns would be unintelligible without explanations, which I have not space to give.) When these incidents which touch one so nearly are pressing upon him, replies Hegel, he sometimes turns his thoughts to the more general march of events. "I abide by this, that the world-spirit has issued to the age the order to advance: and the word of command is being obeyed. The great being marches onward, like a mail-clad, close-locked phalanx, irresistibly and imperceptibly as the sun—onward through thick and thin: innumerable light troops skirmish round it, fighting for the movement, and against. The most part have no idea what is at stake, and merely get shot through the head as if by an invisible hand. All dilatory nonsense and deceptive manœuvring are in vain . . . the safest course (for the opponents) is to approach the giant and smear cobbler's wax on his shoes to arrest his progress, to the edification of their busy and zealous confraternity. . . The reaction must have its rights . . '*la verité en la repoussant on l'embrasse*' is a deep saying. . . Its intention comes to no more (though it fancies just the reverse) than, in the main, to the interest of vanity in impressing its own seal on what has been achieved, and on what it fancies that it hates, in order to read upon it the legend, '*We did this*'" (No. 146). And in another letter, "Our Palladium, therefore, is not an assemblage of decrees of councils, nor a clergy entrusted with their keeping, but is the collective culture of the community; and so our more tangible Palladium consists in the universities and the public educational institutions; to these all Protestants look as their Rome and their episcopal seats" (No. 162).

4. Among isolated points of interest I may just mention the following. No. 182 (to Creuzer) gives an estimate of the importance of Proclus, rather heightening what is said in the *History of Philosophy*. In No. 185 (to his wife) there is a comparison of the Berlin (now the Darmstadt) Holbein (?) Madonna with the corresponding Dresden picture, which shows Hegel's care and interest, but in which he merely follows the opinion of the time. No. 209 (to his wife, on the Vienna tour) mentions his hearing one of Holberg's comedies read at Tieck's house: he did not sit it out, he says, because he had business. (In the Introduction to the *Æsthetic* he speaks of Holberg's comedies as overrated by the Schlegels and their friends.) No. 4, written at the age of 25, alludes to Schiller's *Letters on Æsthetic Education* as "a masterpiece". (The same Introduction shows how deeply this work affected his philosophy.) There is an exceedingly comic account of the billeting of the allied troops in Nuremberg in 1813 (No. 121). And I should have mentioned before No. 222, letter from Gans, with the editor's remarks on the founding of the *Jährbücher für wissenschaftliche Kritik* at Berlin; and the criticisms on Kemble's acting, in the Paris visit.

The editorial work seems careful and judicious, and the book should contribute to making Hegel a less mysterious personage in this country.

BERNARD BOSANQUET.

THE VALUE OF AUTHORITY TESTED BY EXPERIMENT.

The function of Authority, as described in my little treatise on the Art of Measurement, which was noticed in MIND No. 47, p. 466, may be illustrated by the following experiment. Ten gentlemen, whom the business

of the British Association lately brought together, ignorant for the most part of each other's antecedents, agreed each to guess the ages of all the others and to state his own. The figures thus obtained show that estimates of age are amenable to the Theory of Errors which governs observations made by the senses. The mean of several estimates forms a better approximation to the real age than the single guess. The 'probable error,' or error as likely as not to be committed in guessing the age of a person, is for the single shot about 3·5 or 4; for the mean of ten estimates, about 2·5. It is possible by averaging to get rid of at least a third part of the error incident to the individual judgment.

There can be no doubt that more complicated estimates are subject to the same theory. Moreover, the Doctrine of Errors supplies the *rationale* of the common-sense practice of deferring to authority, even in those cases where the answer sought is rather a degree than a number; *e.g.*, What is the probability that nations could be induced to make and keep a Bimetallic Treaty? The principle extends also to those cases where there is an estimate of utility as well as probability; *e.g.*, Assuming that Bimetallism is to be established, what ratio of gold to silver should be legalised?

Most platform speakers on such topics proceed just like one who, having to guess the age of another, should dwell on one set of characteristics, such as grey hairs or bald head. He might frame syllogisms, perhaps adduce statistics, proving that grey hair indicated advanced age. And no doubt such arguments might be usefully addressed to one who had not noticed the fact, or who was ignorant of the import, of grey hair. But, for the intelligent, the real difficulty is to combine the indications given by grey hair and bald head with other symptoms, such as bright eye and elastic step. The balance is struck by a sort of intuition most resembling the unconscious inference which enters into sense-perception, such as the judgment of distance by the eye. The faculty which some butchers have of conjecturing the weight of a beast from its appearance might be mentioned as an operation intermediate in point of complexity between a sense-observation and an age-estimate. In all such cases there is (in the absence of additional information) no corrective but the Method of Errors, the principle of Authority.

The experiment referred to illustrates the limits of the principle. The result of averaging guesses is not so much a man's real age as what he looks. The difference between the real and the apparent age appears to be on an average two or three years either in excess or defect. This 'constant error' does not tend to be reduced by multiplying the estimates of a person's age. All that Authority can do is—what, according to Horace, is all that philosophy can do—to "get rid of a large portion of error".

Again, the experiment illustrates the degrees of Authority. One gentleman, assigning infantile ages to his colleagues, made manifest that he was quizzing. The 'combination-weight' of those observations was evidently zero. On the other hand, special weight attached to a conjecture when the guesser had known the guessee for years. In combining these specially good estimates with those made about a stranger we should take, not the simple average, but a weighted mean. Common-sense and intuitive tact are required to discriminate the weight of Authority.

The present writer does not pretend to improve upon the practice of common-sense, but only to assign the *rationale* thereof. The theory of the matter seems hardly to have received justice at the hands of those English philosophers who, from Locke to Jevons, have dilated on the

noxious influence of Authority. Even Cornewall Lewis, though he thinks it worth while to write a book about Authority, yet regards it only as the resource of those who have not leisure or ability to form an opinion first-hand. But, if the views here presented are correct, when the methods of Induction and the Syllogism have done their best, the generalised Method of Errors can carry us one step further.

F. Y. Edgeworth.

PROF. DELBOEUF ON THE CURATIVE EFFECTS OF HYPNOTISM.[1]

Prof. Delboeuf's memoirs on hypnotism (for notice of the last see Mind xii. 304) have first of all the interest of verifications of the ordinary phenomena by an independent and cautious observer who has occupied himself with the study of them for a very long period. In the next place, there is much that is new in his methods of experiment and in his detailed observations. His most important contribution to the scientific treatment of the subject, however, is perhaps the theoretical explanation of the curative effects of hypnotism (which would carry with it an explanation of other phenomena also) briefly and clearly stated at the end of the present memoir. Before this explanation can be indicated, the author's mode of procedure must be described. The first difficulty that occurred to him was, how to prove that a cure is really due to hypnotism. In order to be perfectly certain, it would be necessary, he concluded, to have "two identical patients treated in different manners" (p. 9). The condition seems at first unrealisable, but it has been obtained by taking advantage of the symmetry of the opposite sides of the body. Two lesions, as like as possible, are made, say, on the two arms of the patient, and hypnotism is applied to one while the other is left to nature (p. 23). The experimental difficulties in the way of this method were surmounted, and exact verifications were obtained of what had been inferred from less systematic experiment. The special point the author set himself to decide was whether, since by hypnotic 'suggestion' of the pain of a burn, for example, the organic effects that usually follow such a pain can be produced, it is not also possible, by suggesting absence of the pain, to prevent the organic effects that would otherwise follow, for example, from actual cauterisation. Experimentally it was found that not only can the organic consequences of pain be prevented by suggesting, at the beginning of an operation, that no pain will be felt, but also the actual organic effects of the operation (or of an accident, or even of disease) can be arrested in their course. The mode of action of hypnotism, the author concludes, is like that of pain. Pain, in fact, 'hypnotises' by compelling attention to itself; whence a whole series of organic effects. Hypnotic suggestion prevents or cuts short these effects by withdrawing attention from the pain. The mode of action of hypnotism having been determined, it remains to discover its mechanism and its origin. The author's theory is "that the hypnotised subject, in his extreme desire to obey his hypnotiser, whom he identifies in a manner with himself, ends by doing with his body and his mind almost what the hypnotiser wishes" (pp. 33-4); "that, for him, the magnetiser, who murmurs in his ear, appears as a creation of his own mind that speaks to him in his dream; so that, at bottom, he obeys his own will"

[1] *De l'Origine des Effets Curatifs de l'Hypnotisme.* Étude de Psychologie Expérimentale. Par J. Delboeuf, Professeur à l'Université de Liège. Paris: F. Alcan, 1887. Pp. 42.

(p. 35). Now the experiments show that organic processes and reflex actions can be inhibited and commanded by hypnotic suggestion. The action of the hypnotiser, then, is explicable by the aid of the above supposition, if it can be shown that the organic life of the 'subject' is in any way accessible to his own will. The final explanation (pp. 40-2), offered by the author as a "speculative synthesis," and not as an experimentally verified theory, is as follows. The means by which the processes of vegetative life are carried on are not entirely unknown to us. In normal life, indeed, the organs that depend on the sympathetic nervous system are withdrawn from the control of the will; but it has not always been so. The body has been constructed, in all its parts, under the impulse transmitted by ancestors; and, in former stages of evolution, the will was coincident with organic processes which now go on apart from it. Ordinarily, of course, it is to our advantage that they should so go on. When, however, the organic life ceases to be normal, when some function is deranged, it would be to our advantage if the will could be brought to bear directly on the affected point. Hypnotism makes this possible by setting free the attention from 'the life of relation' with which, in the normal working state, it is preoccupied. Consciousness reassumes a knowledge that it has not entirely lost; and, now that the vegetative processes vaguely felt in ordinary life are again directly known, the will resumes direct control over them. [T. W.]

In the usual list of contents of foreign exchanges at the end of the No., two journals, announced some months ago, now figure for the first time. *The American Journal of Psychology*, edited by G. Stanley Hall, Professor of Psychology and Pedagogics in the Johns Hopkins University, hails from Baltimore (N. Murray, publisher), the seat of that university, under date November, 1887, and will be continued quarterly. The first No. (including many figures and three plates) runs to 206 pp.—a length much greater than was promised and doubtless betokening a large reserve of other experimental work waiting for publication. It begins more and more to appear what a stimulus to psychophysical research Prof. Stanley Hall has been able, alike by example and precept, to communicate, during the years that he has spent in organising the department of psychological instruction in the young and lusty university at Baltimore. The general character of the work which he now begins to bring before the world as a specifically American product may be gathered from the contents given below—in default of a more detailed appreciation, due to all or most of the chief articles, but unfortunately excluded by present circumstances. It may only be added that the "Articles" occupy 127 pp. of the whole No.; that in the second Section, "Psychological Literature," the main piece (pp. 128-46) is a searching—and not favourable—review of the work of the English Society for Psychical Research, more especially as summed up in *Phantasms of the Living*. The third Section, "Notes" (pp. 197-206), contains a very large number of short statements of fact (culled from journals, &c.), most of them with some psychological import, but mixed with others of a rather promiscuous character. The permanent usefulness (for reference) of this section will depend upon the goodness of the Index that may ultimately be supplied to its contents.

The other new journal is the *Archiv für Geschichte der Philosophie*, edited by Dr. Ludwig Stein of Zürich (published by G. Reimer of Berlin). This is of the promised length, 160 pp. All the four German professors (Diels, Dilthey, B. Erdmann, and the veteran Zeller) associated with the editor

in his enterprise contribute, as may be seen below, to one or other or both of the two approximately equal divisions into which the journal will regularly fall. Among the original articles, the last two—"Kant and Hume about 1762," by Prof. B. Erdmann, and the account by the editor of the Leibniz-letters lately found in Halle—call more especially for notice; but as both have to be completed in another No., notice is more conveniently deferred. The "Year's Report" (for 1886), or first instalment of it, filling somewhat less than half of the present No., includes the English contributions of Mr. Bywater (pp. 142-50) and of Prof. Schurman (pp. 151-60). The latter, probably from being read by a German eye for press, contains a rather large number of misprints.

Reference was made in MIND viii. 151, and has been repeated later, to experiments with some young girls named Creery, which form part of the evidence upon which "Transference of Thought" or "Telepathy" has been held to be established by the more prominent members of the Society for Psychical Research. It is proper, therefore, to quote the following statement which appears in the October No. of the Society's *Journal* (a more frequently recurrent publication than its *Proceedings*):—"It will be remembered that the earliest experiments in thought-transference described in the Society's *Proceedings* were made with some sisters of the name of Creery; and that, though stress was never laid on any trials where a chance of collusion was afforded by one or more of the sisters sharing in the 'agency,' nevertheless some results obtained under such conditions were included in the records. In a series of experiments recently made at Cambridge, two of the sisters, acting as 'agent' and 'percipient,' were detected in the use of a code of signals; and a third has confessed to a certain amount of signalling in the earlier series. . . . This fact throws discredit on the results of all former trials conducted under similar conditions. How far the proved willingness to deceive can be held to affect the experiments on which we relied, where collusion was excluded, must of course depend on the degree of stringency of the precautions taken against trickery of other sorts, as to which every reader will form his own opinion."

THE ARISTOTELIAN SOCIETY FOR THE SYSTEMATIC STUDY OF PHILOSOPHY (22 Albemarle Street, W.). The Ninth Session commenced on Monday, Nov. 7, when the introductory Address was delivered by the President, on the subject of "The Unseen World" (see above, p. 128). On Monday, Nov. 21, a paper was read by Dr. J. McK. Cattell, on "The Psychological Laboratory at Leipsic" (see above, pp. 37 ff.). Discussion followed.

Gustav Theodor Fechner, author of the *Elemente der Psychophysik*, in 1860, and of many other psychological or philosophical works, both earlier and later, died at Leipsic on 18th November last. He had reached the ripe age of 86, being born on 19th April, 1801, at Moscow. He was appointed professor at Leipsic as far back as 1834.

Dr. M'Cosh, at the age of 76, has resigned the office of President of the College of New Jersey at Princeton, U.S.A., to which he passed from Belfast in 1868.

Prof. A. Seth having been appointed to the late Prof. Spencer Baynes's chair at St. Andrews, Mr. W. R. Sorley succeeds him at Cardiff.

THE AMERICAN JOURNAL OF PSYCHOLOGY.—Vol. i., No. 1. W. P. Lombard—The Variations of the Normal Knee-Jerk, and their Relation to the Activity of the Central Nervous System. G. S. Hall and Y.

Motoro—Dermal Sensitiveness to Gradual Pressure-Changes. C. Ladd-Franklin—A Method for the Experimental Determination of the Horopter. J. Jastrow –The Psychophysic Law and Star-Magnitudes. Psychological Literature (Reviews long and short, including a Note on Logical Machines by C. S. Pierce). Notes.

Revue Philosophique.—An. xii., No. 10. Ch. Féré—Dégénérescence et criminalité. Th. Ribot—Le mécanisme de l'attention : i. L'attention spontanée. V. Hommay—L'idée de nécessité dans la philosophie de M. Taine. Variétés (J.-M. Guardia—Don Quichotte devant la clinique). Analyses, &c. (W. Knight, *Hume*, &c.). Rev. des Period. No. 11. A. Binet—La vie psychique des micro-organismes (i.). Th. Ribot—Le mécanisme, &c.: ii. L'attention volontaire. P. Regnaud—Observations sur quelques conditions logiques du langage. Analyses, &c. Rev. des Period. No. 12. Ch. Féré—Note sur les conditions physiologiques des émotions. A. Binet—La vie psychique des micro-organismes (fin). Adam—Pascal et Descartes: Les expériences du vide (i.). Rev. Gén. (G. Tarde—Travaux récents sur la psychologie criminelle). Analyses, &c. Rev. des Period.

La Critique Philosophique (Nouv. Sér.).—An. iii., No. 7. L. Dauriac —Sens commun, &c. (fin). C. Renouvier—Les Dialogues de D. Hume sur la religion naturelle (suite). F. Pillon—Les poésies des frères Tisseur (i.). C. Renouvier—Les derniers ouvrages de M. Guyau. No. 8. G. Lechalas—De l'emploi de l'hypothèse dans les sciences mathématiques. C. Renouvier—De l'idée de force en physiologie : La philosophie biologique de Claude Bernard. F. Pillon—Les poésies, &c. (fin). Correspondance (Lettre de M. T. Whittaker). No. 9. F. Pillon—Notes sur l'enseignement de la morale à l'école primaire. C. Renouvier—Dialogues de D. Hume, &c. (suite). . . . Seconde réponse aux objections de M. Whittaker. . . . F. Pillon—Les conférences de M. Robert Flint sur les théories antithéistes. No. 10. F. Pillon—L'autobiographie du comte Tolstoï. H. Devillario—Psychologie comparée : Instinct, intelligence, raison. L. Dauriac—Un épisode de l'histoire de la philosophie française vers la fin du xix^e^ siècle. . . . No. 11. A. Naville—De la classification des sciences. C. Renouvier—Dialogues de D. Hume (fin). F. Pillon—Un livre élémentaire sur l'art.

Rivista Italiana di Filosofia.—Vol. ii., No. 2. V. Benini—L'indefinito. A. Martinazzoli—La teoria morale delle idee-forze di A. Fouillée (i.). L. Credaro—Un' associazione di Herbartiani a Lipsia. F. Masci—I sofismi del Prof. Ardigò. Bibliografie (Sh. H. Hodgson, *The Reorganisation of Philosophy*, &c.). No. 3. L. Credaro—Gli scritti e la filosofia di L. Strümpell. R. Benzoni—Teorica del bello nelle ultime publicazioni d'estetica in Italia. A. Martinazzoli—La teoria, &c. (fine). F. Bonatelli—I reflessi psichici. L. Ferri—Le lauree in filosofia. Bibliografie, &c.

Rivista di Filosofia Scientifica.--Vol. vi., No. 7. A. Graf—L'insegnamento classico nelle scuole secondarie. T. Vignoli—Note intorno ad una psicologia sessuale (i.). Note critiche, &c. No. 8. E. Tanzi —La perfettibilità psichica degli animali nel passato e nell avvenire. T. Vignoli—Note intorno, &c. (ii.). Note Critiche, &c. (N. Colajanni—I caratteri della sociologia). Rev. Anal., &c. No. 9. P. Molinari—La formazione naturale del diritto. T. Vignoli—Note intorno, &c. (fine). E. Tanzi—Studi sull' ipnotismo : La così detta "polarizzazione cerebrale" e le leggi associative. Riv. Anal., &c. No. 10. S. Lourie—Studi

di psico-fisiologia: I fatti dell' inibizione. E. Morselli — L'ordinamento didattico delle Facoltà filosofiche in Italia, &c. E. M.—Note sull' insegnamento filosofico in Germania. A. Labriola—La laurea filosofica (con discussione alla proposta Labriola). Riv. Bib. (G. T. Ladd, *Elements of Physiological Psychology*, &c.).

Philosophische Monatshefte.—Bd. xxiv., Heft 1, 2. P. Natorp—Zum Eingang. K. Lasswitz—Zum Problem der Continuität. P. Natorp—Thema u. Disposition der aristotelischen Metaphysik. Besprechungen. Litteraturbericht. Bibliographie, &c.

Zeitschrift für Völkerpsychologie u. Sprachwissenschaft.—Bd. xvii., Heft 4. C. Haberland—Ueber Gebräuche u. Aberglauben beim Essen. O. Kares—Die Formenverhältnisse des Wortschatzes u. die sprachlichen Baustile. Beurtheilungen.

Vierteljahrsschrift für wissenschaftliche Philosophie.—Bd. xi., Heft 3. B. Kerry—Ueber Anschauung u. ihre psychische Verarbeitung (iv.). A. Wernicke—Zur Theorie der Hypnose: Eine Anregung. Anzeigen, &c. Heft 4. G. Cesca—Die Lehre vom Selbstbewusstsein. O. Külpe—Zur Theorie der sinnlichen Gefühle (i.). A. Wernicke—Die asymptotische Function des Bewusstseins (i.). Anzeigen, &c.

Archiv für Geschichte der Philosophie.—Bd. i., Heft 1. E. Zeller—Die Geschichte der Philosophie, ihre Ziele u. Wege. H. Diels—Zu Pherekydes von Syros. T. Ziegler—Ein Wort von Anaximander. P. Tannery—Sur le Secret dans l'École de Pythagore. E. Pappenheim—Der Sitz der Schule der pyrrhoneischen Skeptiker. L. Stein—Zur Genesis des Occasionalismus. B. Erdmann—Kant u. Hume um 1762. L. Stein—Die in Halle aufgefundenen Leibniz-Briefe, in Auszug mitgetheilt (i.). Jahresbericht über sämmtliche Erscheinungen auf dem Gebiete der Gesch. der Phil., 1886 (H. Diels—Vorsokratiker (i.). B. Erdmann—Neuere Philosophie bis auf Kant. W. Dilthey—Philosophie seit Kant. I. Bywater—Ancient Philosophy in England. J. G. Schurman—Recent Philosophy).

Received (in continuation from p. 143):—

L. de Rosny, *La Méthode Conscientielle*, Paris, F. Alcan, pp. xiv., 180.
L. Carrau, *La Conscience Psychologique et Morale*, &c., Paris, Perrin, pp. viii., 290.
F. Maltese, *Monismo o Nichilismo*, Vittoria (Sicilia), Velardi, pp. 243, 464.
H. Seyfarth, *Louis de la Forge u. seine Stellung im Occasionalismus*, Gotha, E. Behrend, pp. 59.
A. Wernicke, *Die Grundlage der Euklidischen Geometrie des Maasses*, Braunschweig, J. H. Meyer, pp. 58.
E. v. Hartmann, *Philosophie des Schönen*, Berlin, C. Duncker, pp. xv., 836
H. Druskowitz, *Zur neuen Lehre*, Heidelberg, G. Weiss, pp. 53.
A. Ganser, *Das Ende der Bewegung*, Graz, Leuscher, pp. 18.
C. Lange, *Ueber Gemüthsbewegungen*, Leipzig, T. Thomas, pp. 92.
A. Bastian, *Die Welt in ihren Spiegelungen, &c.*, also, *Ethnologisches Bilderbuch, &c.*, Berlin, E. S. Mittler, pp. xxviii., 480; 25 Tafeln.

Notice will follow.

No. 50.] [April, 1888.

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

I.—ON THE CONDITIONS OF A TRUE PHILOSOPHY.

By Shadworth H. Hodgson.

Signs are not wanting of an approaching thaw in philosophy in this country, a break-up of that long and rigid frost which, reaching us as cold weather mostly does from Germany, set in some three-and-twenty years ago, an epoch marked and perhaps chiefly caused by the publication of Mr. J. H. Stirling's *Secret of Hegel* in 1865. If so, a little more open-mindedness, a little more readiness *audire alteram partem*, may shortly be expected. In the height of the preceding Bentham-Mill despotism, it was vain to expect that any adverse criticism, still less any attempt to reconstruct philosophy on non-empirical foundations, should have attention accorded to it. But that despotism, as was not unnatural, called out a reaction of equal, if not greater, intensity and rigour. Assumptions of one sort were then made up for by assumptions equally audacious of another, and all hope of recourse to the unpopular method of interrogating experience in its simplicity and in its entirety had for the time to be again abandoned.

The reaction from the Bentham-Mill form of empiricism, commencing, as already noted, about 1865, may be considered

to have reached its culmination with the publication of the well-known volume of *Essays in Philosophical Criticism* in 1883, the Essays being the work of nine different contributors, and the whole prefaced by a few words from Prof. Edward Caird of Glasgow. It is not the least significant among the indications of coming change, that the writer of the first Essay, and co-editor of the volume, Prof. (then Mr.) Seth, should have so pointedly broken with anything like strict Hegelian orthodoxy as he has done in his recent Balfour Lectures on *Hegelianism and Personality*. In adopting this looser attitude, it is not likely that he should stand alone. We may reasonably anticipate that many others will be disposed to listen to suggestions and ideas, even when proceeding from non-German sources, to which they would heretofore have been inexorably deaf.

The present juncture, then, seems not unfavourable for bringing forward, in brief and compendious form, a statement of that method of philosophy which has grown up and commended itself to the writer during many years of philosophical work—a method which he certainly could not have formulated in its present completeness at first starting, but which has become more and more clear to him in advancing, as alike sufficient and consistent. Seized and followed at first only in its main principles, it has at last reached a stage of articulation at which it is capable of becoming a consciously used guide to philosophical analysis and construction. It was not till after his last publication in book-form, in 1880, that his attention was directed to formulate for itself the method he had followed. Moreover, it may be admitted, and the admission is not unfavourable to the method, that, tried by its rule, many things in the writer's former works are inconsequent and erroneous. It is these, not the method, that are in fault. It may also be added, that the method is equally opposed to the two rival tendencies or schools of thought mentioned above: to the so-called English school of Empiricism, and to the so-called German school of Idealism. In contradiction to both of these, 'Experientialism' may be its title. I have elsewhere called it the 'metaphysical method,' or 'method of subjective analysis'. I do not, however, intend to enter now upon the controversial topics which these terms may seem calculated to suggest. I wish simply to give a summary, as brief as may be consistent with clearness, of the method itself. And in doing this I shall endeavour to keep distinct the principles of method, the facts upon which they rest, the facts which they in turn

enable us to see, the further principles to which these facts serve as basis, and the resulting division of philosophy as a whole into its several departments, together with some of the chief problems which may best be treated under each.

I.

The fundamental principle of the method upon which the whole rests, stated in its barest possible form is this,—always in analysing experience to subordinate the questions of *how* anything *comes*, and *how behaves*, to the question *what* it is *known as*, what it is for us in our present knowledge of it. But it is obvious that this bare statement of principle requires some preliminary explanation, in order to show its applicability and bearing. Let us ask, then, in the first place, what is the chief aim proposed to itself by philosophy, to reach which this principle is adopted? It will be generally admitted, that its purpose is to get a consistent view of the universe of things, reducing it to intelligibility so far as our powers may enable us to do so, or, in other words, to give a Rationale of the Universe not involving contradictions.

Assuming this to be the purpose of philosophy, I remark, in the next place, that there are two other lines or modes of thinking which at first sight seem to have, and up to a certain point really have, the very same purpose, one being that of ordinary and practical common sense, and the other that of positive science. Both of these aim at understanding the universe of men and things, but also both of them aim at understanding it in the same sense, namely, as it is presented to a normal adult man before he begins to philosophise; that is, as an universe of ready-made beings, conscious and unconscious, in intercourse one with another. Both alike conceive the universe in the same general way, namely, as an universe of ready-made beings; the only difference is, that one interprets and deals with it by rule of thumb, the other by mathematical analysis, measurement and calculation. But the conception of ready-made objects is common to both, and dominates both. Science may resolve the material universe now existing into the cosmic nebula of ages ago, but still the cosmic nebula is conceived as a ready-made congeries. Or, to take another instance, science may resolve the phenomenon of the mechanical impact of one body on another, which is an apparently immediate perception of common sense, into a series of mutually dependent changes of velocity and changes of con-

figuration in the parts composing those bodies, and still the fundamental conception of an object is unaltered. The ultimate result which science can reach is an answer to the question *How comes this or that set of ready-made objects?* and is no answer to the question *What is a ready-made object?*

To answer this latter question, another line of inquiry must be entered on by asking what we know of objects as such, or what any such object is known as, in the actual and immediate experience which we have of it? This inquiry is the beginning of philosophy. And it must be remarked that it covers the whole field of the scientific and common-sense inquiries. In saying '*We* know' and '*Our* knowledge,' it does not assume the Ego as a ready-made object, called for distinction a Subject; but it inquires into knowing and experience *quâ* knowing and experience, not *quâ* the knowing and experience of a Subject as an already known existent. It is an assumption of common sense that all knowing or experience is the knowing and experience of some individual Subject, and we have no reason to suppose that this assumption will not, in some form or other, be verified by philosophy; but then the verification will be subsequent, not prior, to the inquiry. Philosophy refuses it as an assumption, in order to prove, disprove or correct it as a result. The assumptions of common sense are the *explicanda* of philosophy. And therefore the terms of common sense, describing things in which the assumptions of common sense are involved, must in philosophy be used only as terms provisional and merely denotative, until their meaning has been ascertained by philosophical analysis. The point of refusing the assumption of an Ego as a preliminary in philosophy, while retaining the right to hold it as a result in whatever shape it may be legitimately arrived at, is one for which I have always found it hard to gain acceptance. Perhaps I may be permitted to refer to a short paper of mine, "Subjectivity in Philosophy," in MIND viii. 92.

The position and bearing of the first principle of method, the bare statement of which we began with, will now I think be evident. That principle is to be applied to a subjective analysis of experience *quâ* experience, and without assumptions, indeed, as the means of avoiding them. And the subjective analysis of experience *quâ* experience is philosophy, the third and last of three modes of interrogating experience, common sense and positive science being the other two. Farther, it will have been noted that the principle itself is based upon the observation, that these other lines of thought can give no answer to the question *What?*

but only to the question *How comes?* leaving over and beyond them the further question, *What* is that which their inquiries assume to begin with? In philosophy, the question *What?* is the first question, and that necessarily; for experience, the stream of consciousness, is what is interrogated, and experience comes of itself in the first instance, without saying anything of whence or how. It simply comes, and as it comes we say, *What is that?* Till there is a *whatness* in experience, there is nothing about which the question *How comes?* can be put.

The moment of experience, the ever-occurring, ever-present, *now*, in which experience is constantly taking place, is the central fact in philosophy, as it is in experience, the fundamental fact which is the condition of all knowing. This moment or fact of experiencing is the Apperception of Leibniz, Kant and modern German psychologists. It is conceived as a more distinct perception superinduced upon a less distinct one. Prof. Wundt names its special object the *Blickpunkt* as distinguished from the *Blickfeld* of perception. I call it, not Apperception, but Reflection or Reflective Perception, whereby I mark the fact that it is always retrospective, looking back upon the less distinct perception of the prior moment. As we advance into the future, what we see in this superinduced moment of more distinct perception is not what is just going to be, but what has just been, in less distinct perception. By this I avoid the confusing imagery of a spatial world used to describe experience in its lowest terms, and I avoid also the necessity of distinguishing, at this early stage at any rate, between active and passive apperception, which merely for describing apperception is superfluous. Psychology indeed, treating apperception as a function, shows that all perception, and even sentience, requires some reaction on the part of the Subject. But even then there is no such thing as a purely passive state of consciousness, neither is there any purely active state of it. The difference between the faintest perception and the clearest apperception is a difference of degree, not of kind. Neither is it necessary to constitute apperception that it should contain the distinct element of a sense of effort or any other feeling (though as a fact it often does), marking that a reaction is taking place. We need not in any way know or surmise that we are apperceiving, in order to apperceive. Distinct consciousness of a process-content is the sole necessary and sufficient mark of it. Time, however, is requisite for any feeling to grow up from faintness to distinctness; and this priority of faint to distinct feeling is what is marked by the term Reflective Perception.

The fact of Reflection, and its cardinal importance both in philosophy and psychology, under the name Apperception, are pretty widely admitted. But the description here given of it, or the form under which it is here made the basis of philosophy, is due to the principle of method which I have laid down. In obedience to that principle, I abstract from the Subject or Agent of reflection, and consider only the content and process of the experience, or the consciousness, which enters through its ever-present moment. I abstract from the *how comes*, and consider only the *what is*, of Reflection. I abstract from it as the function of a Subject, and consider it only as experience. We shall see presently at what point the consideration of its *how comes*, of the agency and the agent concerned in it, has to be entertained. Since experience so taken includes all possible ideas and excludes none, and since we know of no other experience but this, it is evident that any ideas which we can form of a Subject or its agency, or of agency at all, must be gathered ultimately from this experience, and if taken up *a priori* must be taken up from pre-philosophic common sense.

When for instance Prof. Wundt says, speaking of Apperception, that we "feel it immediately as an inner activity" ("welche wir unmittelbar als eine innere Thätigkeit empfinden," *Phys. Psychologie*, ii. 304, 2te Aufl.), the statement is self-contradictory. We cannot feel anything immediately and as an activity also, for this would be to make it a feeling and a conception about the feeling in one, and no conception is immediate; to say nothing of the difficulty of seeing what can possibly be meant by an *inner* activity. Yet this activity of apperception and nothing else is regarded by Prof. Wundt as that which constitutes the unity of our Being: "darum *ist* eben jene Einheit unseres Wesens nichts anderes als die Thätigkeit der Apperception" (*ibid.*, p. 305). It would seem from this that "we" are pure agency without an agent; though in what sense this agency or activity can be an inner activity, without an agent to be inner to, is anything but luminous.

And here I pause for a moment to remark that the method which I advocate, whatever its final result may be, will certainly make philosophical analysis more searching and potent. The distinction which it applies, and which has hitherto been virtually neglected, is too fundamental to allow it to be otherwise. All existing philosophies mix up the *how comes* with the *what is*. Kant's philosophy, based upon his first hypothetical answer to the question, How is experience possible? is transcendental psychology, not

philosophy in my sense of the term. He begins with the nature of the Subject. And all existing philosophies that I am aware of either despair of apprehending anything whatever of the causal energy which upholds and guides the universe, or else imagine they can grasp its real essence by means of some positive but still anthropomorphic conception. That is to say, they are either agnosticism or psychology; in either case failures as philosophy. Indeed, there seems ultimately to be no other alternative, unless the distinction of method which I now propose, between the *whatness* and the *genesis* of phenomena, is made the basis of procedure. If this is done, and phenomena are fairly examined in the light of that distinction, the final outcome of our philosophy cannot fail to bear a very different impress from any of those with which we are now familiar. By this, however, I do not mean that it will materially or practically differ much from the views entertained by a sound and vigorous common sense.

Another change of great practical importance may also be expected to result, a change not in the form of philosophy itself, but in its relation to the sciences, and the classification and distribution of the whole group. Psychology, *Erkenntnisstheorie* and Logic, which together seem to constitute what in this country is called the Philosophy of the Human Mind, will no longer stand at the head of a group called the Philosophical Sciences; but first and independently, and in a sense at the basis of all, will stand Philosophy simply, treated by the method now proposed, and then will come the several positive sciences, standing on a mathematical (as well as philosophical) basis, and grouped in three divisions, Physical and Inorganic Science, Biology and Psychology. Philosophy will thus be broadly distinguished by its purpose and its method from all the sciences, instead of a certain group of sciences being classed together as philosophical. At the same time it must be remembered, in reference to these and any other changes, that the method now proposed is a method only, and by itself neither condemns an old nor establishes a new result. It is simply a method for the more effective examination of the phenomena of experience, the results being left for experience itself to determine. Some of these results, it is true, I give as I go along, because they furnish the material for further applications of the method, later steps depending upon the result of earlier ones. But it is only by its last or rather total result, I mean as applied to the phenomena in their totality, that the method can be fairly judged.

But to return. Applying the principle of our method to the process-content of Reflection in the moment of perception, the moment at which it becomes experience, we find all instances of it distinguished, in the process itself, into two inseparable and correlated parts, the passing of a content into a distinct perception, and the distinct percept into which it has passed; or, in other words, the content while it is becoming, and the same content when it has become, a distinct percept. The former part we call the subjectivity, the latter we call the objectivity of that content. The subjectivity and the objectivity of a content may either be called its subjective and objective aspects, or they may be referred to the time during which their perception takes place, and called former and latter parts of that process. Or, again, the completed percept may be called the object of the process, the object of the perception. Knowing and known, or perceiving and perceived, is thus a prior distinction to knower and known, or perceiver and perceived. A *Subject* of perception is not given immediately in the simplest cases of reflective perception. On the other hand, these do give us *Existence*, in giving us objects. The moment of perception is the moment of experience, and neither our knowledge of existence actually, nor our conception of what the term means, can have any other ultimate source than this perception. By the term *existence* in the lowest and most general sense we mean the capability of being objective to reflective perception, without specifying any further limitation of the idea. The idea of objective existence is thus prior to and independent of the ideas of a Subject, or a Percipient, or an Activity of any kind. It is in virtue of possessing reflective perception, and of its commensurateness, so to speak, with the idea of objective existence, that man may be called *πάντων μέτρον*. He can think of nothing without bringing it into his experience by this process. An unknowable existent is a contradiction in terms.

The first stage of the application of the principle of method, namely, its application to the moment of reflective perception, which is the foundation of philosophy, I mark off as its first Rubric, under the title DISTINCTION OF ASPECTS. Its chief result is, that it sets the philosophical distinction of subjective and objective aspects of existence at the fountainhead of all knowledge, in place of the psychological distinction between 'inner' and 'outer' experience. This latter distinction rests on the presupposition, which comes from unanalysed common sense, that our self or its activity is something primarily and immediately *per se*

notum, and not only so, but also known in contradistinction from the not-self.

II.

The second stage or Rubric, to which we now come, is that under which the far greater part of philosophical work is done. This consists in analysing the whole process-content of experience as seen in reflection, the whole panorama of objective thought, and arranging and classifying its contents in accordance with that analysis. To this Rubric I give the name of ANALYSIS OF ELEMENTS. The term *elements* is chosen, not from the circumstance that any concrete member of an analysis may be called an element of the whole of which it is a part, but in order to mark the fact, which comes out especially clearly by the present method, that every concrete member, which forms part of the whole, consists ultimately of features which, though distinguishable, are always inseparable from each other, so that no one of them is or can be perceived apart from the rest, however clearly it can be distinguished from others and denoted by an abstract name suggestive of a separate thing.

Thus, to take a simple instance, a sensation of colour is never perceived without its occupying some expanse of spatial extension, nor is any expanse of spatial extension ever perceived without some sensation of colour occupying it. Extension and colour are inseparable elements of the total perception or total sensation. And the same inseparability attaches to their representation or reproduction in thought. Pure sensation is thus an element in perception, and never stands by itself as sensation alone. But these facts are looked at quite differently under the influence of the idea that a Subject is receiving impressions, or reproducing impressions received. It is then usually admitted that we never have what is called a pure sensation, but it is added that the Subject has a synthetic power of combining pure sensations into perceptions, which latter are the lowest concrete thing in knowledge, while the pure sensations are conditions or prior steps towards them. Apart from this presupposition, and looking at the phenomena simply by themselves as phenomena, we find in them merely sensation and extension inseparably combined. And this result harmonises with the distinction of aspects in the first Rubric. For there we found that the distinction between what is objective and what is subjective fell within the whole, and within every part, of the total panorama of

experience. So also here, colour and extension are not contributed to perception, one by the Subject, the other by the Object, but are "equally and alike subjective, equally and alike objective," if I may be allowed to quote from my own work, *Time and Space*. The question of their genesis into perception is deferred till we come to treat of the genesis of consciousness altogether. And in fact it will be found that in order of knowledge we have perception of colour and extension before we arrive at the conception of a Subject, or at the perception of anything which can serve as the object of that conception.

Thus the first great result of analysis under the second Rubric is the discovery of the general fact just described, which I may call the '*Distinction of Inseparables*'. Closely connected with it is another of hardly inferior importance. It is this, that percepts as immediately given in experience, from always having a positive content, tell us immediately what they *are*, but do not immediately tell us what they are *not;* they do not tell us what they involve, or what *more* we may come to see in them on further examination, when brought into connexion by recollection and reasoning with other percepts. For instance, a percept tells us of itself that it is what we afterwards call a state of consciousness. But it does not tell us that it is *only* a state of consciousness; for to tell us this would be to suppose that we already had a knowledge of the distinction between states of consciousness and other things—a distinction which in fact presupposes percepts and not *vice versa*.

Or, to take another instance, the simple perception of a coloured expanse gives us colour and spatial extension, but it does not tell us that this spatial extension is superficial extension only, as distinguished from depth. The distinction of the three dimensions of space—length, breadth and depth—is our way of exhaustively describing space, when we have put together many experiences of percepts occupying it. There is no reason why the steps of actual perception should coincide with the distinctions of geometrical analysis, still less why the two first dimensions should be given first and separately from the third in perception. I do not indeed go the length of saying with Prof. James, in his admirable articles on "The Perception of Space" (MIND xii., Nos. 45-48), that we have an immediate perception of volume, that is, of space in what we afterwards call its three dimensions, depth included; or again, that sight by itself is competent to give us this perception. But so much, I think, is clear, that visual perceptions do not come ticketed

'we are in two dimensions only'. Supposing we adopt the terms of the space-dimensions to describe what we immediately see, we cannot, in my opinion, say that we see more than two, length and breadth; but then we do not *see* them in the terms which we use to describe them; there is no distinction from depth given in the simple perception of a visual expanse. This property of percepts is of great importance, inasmuch as it leaves them open to accretions from further experience. It may, perhaps, be called the '*Non-finality of Percepts*'.

The subject-matter of the first and second Rubrics of philosophy is precisely the same as that of psychology in point of range; but the phenomena which it covers, the thoughts and percepts which are its objects, are therein treated without reference to the Subject of them, without bringing in the consideration that consciousness is the *function*, either of a conscious agent or of consciousness itself. Refer the phenomena to such an agent or agency, and you are psychologising. The advantage of the philosophical method is that we are saved from making *a priori* assumptions about the nature of the agency concerned. This agency, whatever it be, can be learnt from nothing else but the phenomena examined without the assumption of it. These on examination will yield the perceptions on which the conception of agency is founded. We thus have to do in these two Rubrics with *causæ cognoscendi* and *causæ essendi*, namely, of states of consciousness or experiences, but not with *causæ existendi* or *fiendi*.

The sense of effort is a feeling which is very frequent and very prominent in experience. It is the mark or evidence in consciousness of volitional action as distinguished from spontaneous or involuntary. It is, for instance, an element in attention, and an element in choice, and an element in reasoning. All these are volitional actions. The content or object which is attended to or neglected, which is chosen or avoided, which is connected or disconnected with other objects, as in attention, choice and reasoning respectively,—all this falls under the analysis of these Rubrics, quite irrespective of the nature of that agency of which they are functions. Ultimately, therefore, it is to phenomena as examined by philosophy in these Rubrics that the practical sciences, as well as the theoretical, must be referred, as the examination which finally determines their real and essential character. The laws of Logic and the laws of Ethic have their source in the phenomena of consciousness or of experience thus examined. It is here that their validity or worth,

their *de jure* as distinguished from their *de facto* character, is ascertained and established. The same is true of Mathematic. The act of attention is the common root of numeration in Mathematic, of judgment in Logic and of choice in Practice. And both branches of Mathematic, calculation and geometry, are based upon what may properly be called the formal element in consciousness, time and space, considered as abstractions which retain nothing of their content but the divisibility and figurability which they derive from it. The problems relating to Infinity have here their origin, and consequently here, if at all, the ultimate means of solving them must be found.

The total object of reflective perception has been described above as a process-content. It is a process because it is something which takes place or goes on in time, and because its content is a changing one. The feelings which compose it are in some cases different and simultaneous, and in others different and successive. But in all cases they have duration. Time has been called specially the form of the 'inner sense' or 'inner experience'. But this is misleading. Time is the form of all experience without exception. It does not cease to be a form of those feelings which occupy spatial extension besides, in one or more or all of its modes, because they have space as their form also. Yet space has been contradistinguished from time, as the form of 'outer experience'. Wrongly, since in that case feelings which occupied space would have to be 'outer' *to themselves*, seeing that they occupy time simply as feelings. Spatial extension is, indeed, the condition of our having the perception of outness, of parts beyond parts, simultaneously existing side by side with one another. Coexistence in space is not the same thing as coexistence in time, which is simultaneity. Time and space, therefore, are not only irreducible one to the other, but each is immediate to perception and inseparable from it; time or duration being inseparable from feeling generally, and spatial extension, the rudiment of what we afterwards know as space in three dimensions, being inseparable from certain kinds of feeling only. There are no other forms of feeling of which the same can be said. The perception of difference and the perception of change require time only as their inseparable form or mode of existing. The perception of motion requires some mode of space also. Motion is change of place in time.

It is obvious that time and space are widely different from that which occupies or fills them. If we call them the

formal element in perception, that inseparable element which occupies or fills them may properly be called its material element, without implying physical materiality thereby. The analysis and classification of feelings belong to the present Rubric. Except the formal element, there is nothing in experience which does not fall under the head of feeling. Feeling, time and space are the three ultimates to which all experience may be reduced. All its varied forms are modes or combinations of two or all of these three. But the differences of feeling are inexhaustible. The functions of the Subject which are distinguished by psychology as appetite, desire, conation, *Trieb* (for which there is no good single equivalent in English), attention, volition, and others, are known to us mediately by means of some variety or other of immediate feeling. What have been called 'local signs,' by which we estimate size, distance and position of objects in space, are modifications of feeling. Pleasure and pain are feelings. Passions are feelings. The æsthetic emotions are feelings. It is under this Rubric that feeling of every sort must be analysed, classified and tested, as well with regard to its moral worth and value, as with regard to its similarities, dissimilarities and affinities.

The questions concerning pleasure and pain are perhaps as important and far-reaching as any. Are pleasure and pain, or either of them, general kinds of feeling upon which the varieties of sensation and emotion should be conceived as superinduced modes or developments? Or, on the other hand, are they modes attaching to other sensations and emotions, in which they arise when a certain degree of intensity is attained or overstepped? Or, finally, are they feelings separable from others and *sui generis*, though constantly and closely combined with others? Psychologists who begin by assuming a Subject will probably be more inclined to the first alternative, as tending to give a certain fulness and reality to its somewhat empty notion; metaphysicians to the second. But the matter is still *sub judice*.

Another most important inquiry belonging to this Rubric is into the order in which perceptions are retained or forgotten, reproduced and recombined, as well in imagination as in thought and volition, and as well without as with the introduction of new presentative perceptions, in short, the whole subject of the Association of Ideas. The first proceeding is to distinguish trains of purely representative perceptions from those with which presentative perceptions mingle. The next is to distinguish trains of the former

kind into those which are purely spontaneous or unmodified by volition, and those in which the train of spontaneous representations is modified by attention in view of some more or less conscious purpose. If these distinctions were strictly attended to, and the examination conducted on their basis, I cannot but think that the laws of association would come out very differently from what is now most usually supposed. It is not permissible to discuss the matter here, but I may say that I see no reason to depart essentially from the view which I have taken in works published several years ago.

The sense of effort for a purpose, which marks the transformation of spontaneous redintegration into voluntary, or which is the evidence in consciousness of the reaction by which it is effected, is a great turning-point in the analysis of this Rubric. It is the limit between perception on one side, and conception, judgment, thought and reasoning on the other. Moreover, since all content of consciousness is feeling, it is also the limit between likes and dislikes on one side, and conscious choice, or practical adoption of an alternative, on the other. The action of the Subject, which below this point was known only as a train of sequent and co-existent perceptions, is here known as a conscious modification of that train; while, at the same time, it bifurcates, as it were, though without a complete separation, into two lines plainly distinguishable from each other by the predominance, though not exclusive presence, of their characteristic mark,—the line of thought and reasoning on the one hand, and the line of choice and practical action on the other. The former is the domain of Logic, the latter of Ethic.

It is necessary to say a few words of the line of thought, conception and reasoning, in this place, because philosophy itself belongs to that line, and philosophical method depends to a great extent upon our knowledge of its true nature. The most elementary act in thought is a judgment. This is conditioned upon attention. But so long as attention is directed to following the train of percepts as they rise into consciousness, as in observation of events and objects purely as such, the judgment is purely existential, namely, that the percepts as perceived are really there. It then simply registers the result of the attention alone. But when more than this is done, as, for instance, when, looking, let us suppose, at a flower, I say mentally, 'This percept is white' —a judgment which we will call 'A is B,' I am then first distinguishing A, as marked by its location in the context of consciousness, from its own attribute B, and next reuniting

them as an attribute-bearing percept in the judgment. Difference is involved in the coalescence or partial identity which the judgment expresses. In another way also difference is involved in the identity. In saying 'A is B,' I am arresting the train of percepts at A, which is perceived as B, *i.e.*, white, and holding it fast in thought while I predicate B of it; there is difference in the time which elapses in passing from the percept AB as subject to the percept AB as predicate. There are two A's, one prior to the other in time, and similarly two B's. Logical thought requires me to hold the first A fast in thought, in order to predicate B of it, notwithstanding that the first A is replaced by a second A when I get to the predicate of the judgment. I choose an instance of extreme simplicity, though aware it may lay me open to the charge of over-refining; but its advantage is that the same analysis will hold good *a fortiori* of all more complex cases.

The result of a judgment is a concept. The AB, which is turned out at the end of the judgment A is B, is not a percept simply, but a percept modified into a concept. It has, so to speak, entered the mind as a percept, and has been reborn as a concept. The mind has stamped its *imprimatur* on it. The train of percepts, as it occurs originally in consciousness, is a train of differents and similars which have no nexus but that of time or of time and space together. The order in which they enter into experience, or are reproduced by purely spontaneous redintegration, may be called a perceptual order. But when we attend to this train of percepts in perceptual order, with the purpose of understanding it, we modify the perceptual order, and make a nexus which suits our purpose. Similarity and contrast are made into a logical nexus which they were not before; so also are particular time and space relations, if they suit our purpose.

The whiteness B is prepared by the judgment which results in the concept AB for being classed with other instances of whiteness wherever they may be found, and AB brought into logical relation with them; and the simple objectivity or 'thisness' A, in the same concept, is similarly brought into logical relation with all other instances of simple objectivity or 'thisness,' which latter *per se* is merely the particular location of the percept in the context of consciousness. Both the object and its attribute are then *classed*, placed in a logical order of thought, over and above the perceptual order in which they primarily occur; this logical order consisting, in its totality, of piles of *concepts*,

i.e., abstract and general terms piled by means of *genus* and *differentia* into groups quite different from the perceptual or natural grouping, in which object and attribute, now in thought separated, were inseparable. But before this new grouping can be effected, it is evident that we must have had many instances of trains of perception which have been registered in memory by attention, and by what I called above purely existential judgments. Our purpose in referring percepts to a conceptual order may be described in its largest and most general scope as the purpose of understanding them—that is, reproducing them in the mind with logical consistency so far as this itself is consistent with all the facts.

It should also be noted that generality depends upon conception, not conception upon generality. Both A and B, as well as AB, become concepts from being percepts by the acts (1) of attention which separates them for the purpose of uniting them with something not themselves, and (2) of judgment which re-unites them with each other. They are then capable of use as general terms. And this general applicability they possess because they are abstracted, or taken out of the individual context to which they belong, and made the first step in our self-acquired knowledge of the whole context, a great part of which at that moment is itself *in futuro*. If there was no other white object in the world, *white* would still be a concept, ready to become a general term, if and when another instance of whiteness should occur.

While, then, I entirely agree with the school represented by Prof. Seth in his polemic against what he calls "the logic of abstract identity" (see his Balfour Lectures on *The Scottish Philosophy*, p. 167), I think that there is another side of the subject which writers of that school are too apt to ignore, if not to deny. I mean that the difference which is involved in logical identity has its source in the train of percepts which is the necessary condition and, so to speak, the material of logical and conceptual processes. There is, moreover, continuity of time, and continuity of space in time, in the perceptual process, as well as difference and as well as similarity. The elements of concepts, of the logical nexus, and of the conceptual order are all present in perception before perception is modified by thought. Difference and identity do not appear in the conceptual order because it is the nature of the Concept, *Der Begriff*, or *Das Denken*, to be identity in difference, the union of opposites, or the negation of a negation.

Thought modifies the perceptual order into a conceptual one, and gives back percepts in the form of concepts, in order to understand them. It is man's way of putting Nature. I cannot, therefore, agree with Prof. Seth when he says that "the individual is a universal—a set of universals —particularised" (*ibid.*, p. 171). This is only true of the individual when the word is taken to mean the real thing called individual *so far only* as it bears the *logical* character of individuality, and not the real thing to which that name is applied. *Universals* and *individuals* are terms of logic. The real things to which they are applied belong one and all to the general term *individual* and not to the general term *universal*. And these real individuals are each the "conflux" or union, not of "generalities," but of percepts, that is, of qualities or properties as perceived, and not of qualities or properties as thought. This is true not only of the train of percepts which we have now been speaking of, and of which the conceptual order is a modification, but also of the real world as it appears to common sense, and as it appears to positive science. The properties and qualities of natural objects meet and are combined in those objects in perceptual order; each property and quality is individualised in kind, quantity, intensity, and inextricably intertwined with the others in one real whole. A real individual thing, say a pebble on the beach, is not a plexus of general thoughts held together by a conception of the mind, but a plexus of perceivable qualities held together by natural forces, of which the conceptual plexus is the human and very imperfect version. Even the calculus of the algebraist is unequal to cope with the minuteness of the texture, the multiplicity of the shades of difference which go to constitute a single real thing, to say nothing of the modes as yet undiscovered, perhaps even unimagined, in which what we call chemical affinity operates. Logical thought is but an imperfect mode of bringing into intelligible shape the inexhaustible riches of reality. How vain, then, is the imagination that the power by which the universe exists is the identity in difference of the *Begriff!* What we have translated out of perceptual into conceptual order, for the purpose of understanding it, we must translate back again into perceptual order, if we would have it before us in consciousness in the same manner of existence in which it exists in nature.

But my limits warn me to hasten to the point at which, in the logical method of philosophy, the second Rubric closes and the third opens. I mean the analysis of the processes of perception and thought combined, by which we attain the

knowledge of things as opposed to thoughts, or in other words, the knowledge of *objects thought of* as opposed to the *objective thoughts* which represent them, which latter have been our sole companions hitherto. We find by experience that these objective thoughts, under which term I include percepts as well as concepts, percepts imagined and inferred by reasoning as well as presentatively perceived, and always represented ultimately in perceptual order, fall into various comparatively stable groups, and hold and act together as single things, as the common objects of everyday life and of the scientific mode of thought. So far as these are known to us, they are known as plexuses, so to speak, of objective thoughts, feelings, states of consciousness. They are our states of consciousness, yet we have not made them, in any other sense than that of discovering them, by perception and inference from perception. Something in, or represented by, the perceptions has compelled their formation, by operations in which conception and thought have played a necessary but still only a ministerial and subsidiary part. The perceptions have somehow by our means got grouped for us into concrete empirical objects. Still, so far as we have seen at present, they are only grouped percepts, feelings, ideas or states of consciousness after all.

One of these groups is what we afterwards call the body of the observer. I mean that, for consciousness observing experience, one of the groups which form themselves as its objects has this peculiarity, in addition to many others, that it is always present when any other states of consciousness are, that it always forms a certain constant inner sphere at or about the centre of the visual sphere of space, and that changes in it are in specially close and intimate connexion with other feelings and perceptions in the same consciousness. There is, moreover, reason to suppose that the perception of this particular group of percepts, and the perception of other particular groups more immediately surrounding it, proceed strictly *pari passu*. This is not perceived and distinguished as a single group before they are, nor they before it. The detail of the methods by which this takes place, by which we find ourselves as real percipients in a world of real objects, falls partly under the present Rubric and partly under the principles which are examined in the Rubric following. However, it is beyond the scope of the present paper to enter upon this part of the subject more particularly.

What concerns us here is the difference between objects thought of and the objective thoughts representing them,

together with the grounds for drawing that distinction. This question is logically prior to that of the distinction of objects thought of from one another, and is the last question of the second Rubric. How do we know that there is an object thought of other than the group of percepts which we say represents it? How does the objective thought develop, or develop itself into, an object thought of? In short, what is meant by an object thought of?

Let us begin by seeing what cannot be meant by it. It is clearly not an object out of relation to consciousness, not a 'thing-in-itself'. It is therefore something in consciousness additional to what we have hitherto called its objective thought. This something additional, however, is not the simple perception or thought of existence; for this existence is possessed by objective thoughts as such, all of which exist objectively to reflective perception. The addition must, therefore, be something within the limits of the objective thought itself, and yet, being an addition, must be something not yet perceived in it.

But what *can* be added to the content of an objective thought as now described? Clearly this—the thought of its complete determination as an individual thing beyond the point reached by our most complete knowledge of it at any given moment. The objective thought is not one but many. At one time it is this, at another that; it fluctuates with memory; it is liable to mistake; it is increased, diminished and corrected by new observation. It cannot possibly be said to hold and act together as a single thing in the same way as any given shape of it *plus* its supposed complete determination, whether positively known to us or not, can be conceived to do. The objective thought *plus* its complete determination at a given moment is the object thought of in or by the objective thought *minus* that complete determination.

This, I think, is what is meant by an object thought of, as opposed to the objective thought of it. This is its logical *differentia*. The idea of an object thought of differs from the idea of an objective thought by the additional thought-item of its complete determination at any given moment. But whether any such objects thought of really exist in the full sense of *real existence* which is included in the common-sense notion of reality is a question which must be determined under the following Rubric. Assuming that they do, then their logical *differentia* is completeness of determination at any and every moment of their existence. What that full sense of real existence is falls under the following Rubric

also; in the present Rubric it would be an assumption that completely determined objects really exist in this full sense. The idea is expectant of its applicability.

An object thought of is taken in the present Rubric simply as an existing object completely determined at any given moment, excluding the consideration of its real nexus with other objects, excluding the *energies* of which it is the vehicle, and which connect it on one hand with its real conditions, on the other with its conditionates, its own future states in order of evolution among them. It is even yet, even as an object thought of, but the ghost of a reality in the full sense of that term. We abstract from the changes which it has undergone up to the moment at which we consider it, and from the changes which it will undergo after that moment. It is completely determined at every moment which we may select as compared to our objective thought of it at that moment. This is its *differentia* from that objective thought, and the first step towards our conception of its full reality.

Observe, in the next place, that this conception severs in thought the connexion between the group of percepts, which is the object thought of, and the process of perception by which its content has been given, which is the objective thought of it, because the supposed determination would not be complete if the group was still identified with any group of objective thought not completely determined; for then the whole so formed would be incompletely determined, which would violate the supposition. At the same time the connexion between the group supposed to be completely determined and reflective perception altogether is not severed; the group is still an object of reflective perception at subsequent moments, only in the form of a completely determined object, already made and finished, in virtue of the supposition. Reflective perception has then two objects before it in place of one—its own objective thought and the object thought of thereby. That is the outcome of the whole process.

The severance in thought thus effected is the necessary condition of regarding the objects severed as located differently in space from the perception of them located in the body, which is the starting-point of psychology. They are thus in a manner cut loose from their subjective aspect. When, besides this, the severance is conceived as total, in forgetfulness of the fact that the existence of the severed object in its complete determination can be known or surmised only by reflective perception, that is, by an

exercise of the same function as before, only at a different moment of experience, then the error is committed of regarding the severed groups, not merely as real and phenomenal, but also as absolute objects or 'things-in-themselves'.

The question we are now discussing is one of the cardinal questions of philosophy—the conciliation of the ideas of reality and subjectivity. Their attempted identification in the phrase an Absolute Subject is no solution, but merely a restatement of the question. We cannot get at the notion of a Subject but through that of an Object, and we cannot conceive any Object as absolute. The method set forth in the present paper begins by abstracting from the common-sense notion of a Subject; and its analysis has not disclosed one, so far as it has gone at present. The severance in thought of empirical objects thought of from one another, which again rests on the distinction between objects thought of and objective thought, is, in fact, a prior condition of disclosing it.

One word in review of our present position. We begin, I may repeat, by abstracting from the common-sense fact, that consciousness is always some one's consciousness, possessed by some Subject, or, as each one says in his own case; *my* consciousness. Accordingly we examine the process-content of consciousness simply as a process-content. But this imposes on us the task of looking in the process-content for the grounds of the common-sense fact abstracted from. We cannot ignore that fact, neither can we assume it as self-evident without analysis. We have as it were to work up to it, or, if it be illusory, to the grounds of the illusion, from the analysis of the process-content. This we proceed to do by showing in the first instance the grounds on which we sever, in the process-content, a group of percepts from the perception of it, namely, by considering it as completely determined, without severing it from reflective perception altogether. The objectivity of groups of percepts as empirical realities, or, as we may also express it, their reality as well as their objectivity, thus secured, becomes the ground on which we base, or justify, the conception of the relative or partial independence of the several groups of percepts as real things in presence of each other; and this again is the means of referring perception and consciousness generally to a seat or seats in groups of one particular class, namely, living organisms, which is the conception with which psychology begins.

III.

A great part of the observation and reasoning upon which the two latter conceptions depend belongs to the next, or third, Rubric of the present method. The second Rubric closes with the distinction between objective thoughts and objects thought of; the third opens with a distinction within the latter. The work of analysing experience as it comes to us in consciousness, of discovering *what* the process-content of experience is, being provided for by the second Rubric, it remains for the third to ask the remaining question of the method, the question of the *genesis* of experience itself, and of the various components or objects which it contains. The question is, first, *How comes* consciousness itself into existence? and, second, *How comes* this or that object of consciousness to be what it is and where it is in the panorama of Experience? What determines these things and upon what do they depend? We thus, by asking this question of the whole panorama and of its parts, think of them as constituting, in their totality, an order of conditions and conditionates, an order of Nature, working under uniform laws. The question in the two former Rubrics was, *What is* this or that? Here it is, How is it *conditioned* and what does it *condition?* Accordingly I entitle this third Rubric the ORDER OF REAL CONDITIONING.

It is here that we find ourselves face to face with that full sense of the term *reality* which has been mentioned above. A real object in the fullest sense is something which is not only real as an existing object of consciousness, but which also *does* something, contributes actively to determine other things or events, or has them depending on it; and that not merely in the character of being evidence for them, or of forming an element in the knowledge of them, but in the sense that they depend upon it for their existence, whether we have a particular knowledge of it or not. Such real objects are called real conditions.

It is clear from what precedes, that all real conditions must at least be objects thought of, but it does not follow that all objects thought of are real conditions. They may be conditionates only, which have no reaction. A fiction of the imagination, a chimæra for instance, may be assumed to be completely determined, and in that sense a real existent, but it does not follow that it is a real condition of anything. On the other hand, the imagination or objective thought of it may be itself an object thought of, and being real as a state of consciousness, idea or feeling, may (con-

ceivably) act and react with other states of consciousness or with the Subject, and in this way be a real condition, contributing to mould the course of Nature.

For now it is the place to observe, that objective thoughts may *in that character* be taken as objects thought of. We have only to consider an objective thought taken at any given moment to be completely determined as what it is, and we *ipso facto* treat it as its own object thought of. The logical *differentia* between them remains the same, but the things distinguished by it have precisely the same content, and become opposite aspects of each other, or are like the two A's in A is A. It would have been confusing to have mentioned this before, because we arrive at the knowledge of this case only by first seeing the difference in cases where the content is different. But this latter case it is, which, by enabling us to treat states of consciousness as objects thought of, enables us to examine, without prejudging it, their claim to be real conditions, that is, realities in the fullest sense of the term, and real links in the chain of causation.

What we have to do, then, under this Rubric is first to treat all things as completely determined existents, that is, as objects thought of; feelings, ideas and states of consciousness, as much as everything else; and then to inquire which among them are real conditions as well as real conditionates. This being done, the remainder of the work consists in discovering the laws which govern the action of real conditions *inter se*, and the production of the conditionates which depend upon it but have no reaction. In other and more popular words, the whole of Nature considered as a concatenation of causes and effects is its subject-matter.

Let us see, then, more particularly what is meant by a real condition and what by a cause. It is plain that we must begin by taking some conditionate and putting to it the question *How comes?* This being done, we may define a real condition as—any object thought of, without which another given object thought of (the conditionate in question) would not exist. Following this, we may define a cause, in accordance with J. S. Mill, as—that combination of its real conditions, upon the completion of which a given object thought of begins and continues to exist. (See MIND iv. 516.) For instance, in an eclipse of the moon, the attainment of a certain series of points in the relative movements of the sun, moon and earth, in presence of a percipient, is the combination of real conditions upon which the apparent spreading of darkness over the moon's disk begins and continues. The conditionate is said to *depend* upon the

conditions in combination, and not *vice versa*, because the apparent spreading of darkness over the moon's disk cannot be thought of as a reality existing of itself, but must have some real conditions other than itself. What can these possibly be, if what we now call its real conditions are conditioned upon it? There is no answer. Sun, moon, earth and percipient have an existence independent of it, but it has no existence independent of them. True, it is among their *causæ cognoscendi*, it is *evidence* for their existence; but they are among its *causæ existendi*, which is the relation we are here concerned with.

The foregoing illustration is, of course, merely an example, by which my distinction, between conditionates which are and conditionates which are not real conditions, may be made clear. That the sun, moon, &c., are the real conditions in this case requires distinct proof. And the first question for this Rubric is, to what kind of phenomena do the real conditions in the order of real conditioning, or dependence of fact on fact, commonly called causation, belong, —whether to so-called physical phenomena, or to consciousness as such, or to Subjects of consciousness, or to two of them, or all three? This is not a question to be begged by an illustration. At the same time it is most important to observe, that it does not presuppose a knowledge of the real nature or ultimate essence of causation. This is a question which is probably beyond the reach alike of science and philosophy, even if the very form of it as now stated does not involve a misconception. We may discover to what class of phenomena the phenomenon known as causation is to be referred for its explanation, or, in other words, in the line of what kind of events real conditioning flows, without discovering in what its essence consists. The question where it is to be found is prior, not indeed to the question what it is known as, but to the question what it would be known as if fully known.

But the chief point I would insist on is, that in stating the alternatives as to the vehicle or line of causation,—physical phenomena, consciousness and Subjects,—these must be taken as objects thought of, and not as objective thoughts merely; inasmuch as the question of causation, or dependence of phenomena *inter se*, does not arise unless and until phenomena are taken in this restricted sense. If consciousness, for instance, is held to be a real vehicle of real conditioning, it must be so on the same footing as physical phenomena; that is, on the footing of objects thought of, and not on the ground that it is our sole means of *knowing* pheno-

mena. The fact that we know phenomena only through or in the shape of objective thoughts does not show that objective thoughts stand in causal relation to one another. This point, the question of genesis, requires separate proof, and this is the very reason for bringing it under a separate Rubric. We shall shortly have occasion to recur to this point in another connexion.

The ground covered by the third Rubric is the same as that covered by the several positive sciences, inorganic, organic and psychological. But it is needless to say that philosophy does not infringe upon these sciences. The same relation which mathematic holds to the first and second Rubrics is here held by the positive sciences to the third. The task of philosophy is simply to assign their relations to itself, and for that purpose to review and give a philosophical shape to their fundamental conceptions, which are the points at which they are, so to speak, incorporated into the philosophical organisation. The conceptions of matter, motion, force, energy, molecules, atoms, action and reaction, organic matter, life, and others of similar importance, must necessarily fall within the province of philosophy as well as science, at least for treatment on their logical side. Philosophy cannot do more without overstepping its boundary and entering on that of physical science, which is concerned with the discovery of the *de facto* order of Nature, or Real Conditioning in physical matter.

Precisely similar is the true relation of philosophy to psychology, only that here the boundary is by no means so obvious, and consequently by no means so generally recognised. As Prof. Wundt most truly says, psychology, like every explanatory science, requires a fundamental presupposition to which it may refer its phenomena for their explanation. Its fundamental problem, he adds, is to form a conception of the Soul as such a basis of explanation, analogous to the basis possessed by physic in its conception of Matter (*Logik*, ii. 502). It seems indisputable that, if psychology abdicates the function of framing such a fundamental conception of the agent or agency upon which consciousness depends, it abdicates thereby its claim to be considered an explanatory science, and takes up instead with the position of a descriptive or classificatory one, which is but the preliminary of the explanatory or, as I should call it, the positive branch.

Yet there are not wanting those in this country who are ready to abdicate the function without expressly renouncing the claim; for instance, Mr. James Ward, in his otherwise

able article "Psychology" in the new edition of the *Encyclopædia Britannica*. He there speaks of "the purely formal notion of a subject or pure Ego," and then immediately adds —"For empirical psychology this notion is ultimate; its speculative treatment falls altogether—usually under the heading 'rational psychology'—to metaphysics" (*Encyc. Brit.*, xx. 85). His article describes the gradual attainment of the notion in consciousness, but contains no speculative treatment of its object, the pure Ego or Subject. Yet it is not headed "Empirical Psychology". The pure Ego, when once assumed, is no doubt an embarrassing topic. It is an entity made of an abstraction, a class of beings to which no legitimate positive science is devoted, still less Metaphysic. Herein Mr. Ward's ideas have a decidedly pre-Comtian complexion.

The old psychology was built on the assumption of a special agent for consciousness, different in kind from Matter. Mind was opposed to Matter, or Subject to Object, as an ultimate and self-evident fact. The difficulty is to say *what* Mind or Subject (or by whatever name the agent may be called) is known as. What is the analysis or content of the notion? I do not say, What is its ultimate essence? But it is requisite that it should have some content, if it is to be brought into such relation with its phenomena as to afford an explanation of them. Otherwise it is a mere word, nothing but a *that which* causes the phenomena to be explained, tautological with them. If psychology is to be an explanatory science, it must give its explaining agent (or agency) some positive content. Now this is just the position which the present method assigns to it. I would no longer base psychology on the assumed difference between Mind and Matter, Subject and Object, Ego and non-Ego, or the like, but on that between consciousness and its real conditions. Consciousness being first analysed simply as process-content, the next step is to connect it with its real conditions. Psychology begins with this latter step; the proof of which is that psychological analysis of consciousness is always analysis of it, not as process-content simply, but as the function of a conscious being. It then falls into line with the other positive sciences, the relations of which to philosophy are assigned in the third Rubric of the latter.

To show this sufficiently for our purpose we must go back a little on our steps. Consciousness is knowing or knowledge; it is also the objects known in that knowledge. But it is not production or causation of the objects known by the knowing them. The knowing and the known are commen-

surate, opposite aspects of each other. But production or causation is one class of objects known, the particular relation of dependence of object on object in order of existence. We are bound to put the question of dependence, conditioning, causation or production to everything, because this relation is everywhere discovered in objects known. Every object known has something to which it is bound by the relation of dependence; and to know it thoroughly we must know what that something is. But when we put the question to consciousness itself, or knowing, including *all* objects known, we find that we are asking a self-contradictory question. To put the question is necessary, in order to bring out the contradiction which putting it involves. The contradiction is this: We are asking for something else beyond objects, some object not included in *all* objects.

It is at this fundamental point that Idealists go astray. They identify consciousness, not only with all its objects, but also with production or causation. They would probably argue thus: Consciousness is all its objects; causation of object by object is an object; therefore consciousness is causation of its objects. But if that is their argument, the reply is obvious. Consciousness is all its objects in the sense of being the opposite aspect of them, in the sense that knowing and known are commensurate. There is a difference of aspect in their identity. And in this sense it is quite true that consciousness is causation, namely, as a knowing or knowledge of it; we have no knowledge of causation but by knowing it. But this is very different from saying that knowing is causing simply, whereby the two are identified without difference of aspect.

Common sense is here with me against the Idealists; everybody sees that knowing is not causing. But I should be sorry to rest my case on common-sense intuitions alone, in which there is no analytical test of truth or falsity. The process-content of consciousness as it takes place in the successive moments of experience tells us nothing of causation, nothing of any dependence of the percept on the subsequent perception of it, or of the perception on the preceding percept. What *more* there may be in the process-content than the relation of aspects is not a *datum* of consciousness; causation is not a *datum;* and whatever we may learn about its being contained in the process-content must be learnt from the analysis of its whole objective panorama. Now what we actually have in consciousness, in this panorama, is an objective thought of causation; causation being the object thought of. Assume our objective thought to be

completely determined in all its relations,—which we can do on the principle, mentioned above, of the non-finality of percepts,—and it would be causation itself, the secret of the universe, as known to omniscience. But even this knowledge would not be identical with causation itself, that is, with omnipotence, except as its subjective aspect; it would not be real causation in the full sense of reality, the sense in which it is possessed by real conditions, which can *do* as well as *be*.

Yet there is a sense in which we can put the question *How comes?* to consciousness, without contradiction. It is by severing in thought the relation of aspects, and thereby taking the term *consciousness* in a restricted sense as something separate from its objects, or knowing as something separate from the known. There is then, taking it in this restricted sense, something left outside consciousness, to which to refer it, as the condition on which it depends, in case the facts permit. But then also, by separating it from its objects, it is *eo ipso* treated as an object itself. Both they and it are then treated as objects thought of, our treatment of them being the objective thought which represents them, being in fact our knowing or knowledge of them. This treatment of consciousness, the search for its real conditioning in this restricted sense, is the fundamental question of psychology, and the following it out in detail, into the particular phenomena of consciousness, makes up the body of the science. We have to ask here whether consciousness itself can be the condition of its own states; or whether an Ego or other immaterial substance is its condition; or whether this part is played by physical substance or physical energies. All these are legitimate questions, in the sense of coming legitimately within the province of psychological science. Psychology is thus based, not on the distinction between Subject and Object, or any analogous distinction, but, as stated above, on the distinction between consciousness and its real conditions.

If in psychology taken as a science it should be clearly demonstrated, either that an immaterial Subject is the agent or proximate real condition of consciousness, or that consciousness itself without any Subject is an independent agency, either of these results would react upon philosophy, and impress upon it an indisputably Idealistic character. In the first case we should have a partial, in the second a total, Idealism, since both the process-content and the real genesis of consciousness would be accounted for at one and the same stroke, without requiring the intervention of

Matter. This remark is intended to show, that the method which I now propose by no means prejudges or carries with it a foregone conclusion of philosophical problems, in one sense or in another. It provides only for their full and fair examination, without surreptitious assumptions.

One remark remains as to the feasibility of putting the question of genesis to consciousness. If consciousness is the total panorama of existence, how, it may be asked, is it feasible to inquire into its genesis? The answer is plain. By taking it in its moment of genesis, the moment of reflective perception. It is by passing through that moment that the objective world takes its place in the panorama. Experience is the series of all these moments in the whole life of an individual. They are indefinitely numerous, but one in kind. Just as the panorama of visual space is centred in the organ of visual perception, so the panorama of existence is localised, in time and space together, in the organ or agent of reflective perception.

It is sometimes made an objection to what is called introspective philosophy, that we cannot both perceive and analyse our perceiving at one and the same moment. This is true, but then it is not required of philosophy to do so. The moments of reflective perception are many in number, though one in kind, and earlier moments are reviewed and analysed by later ones. Reflective perception is the name for that which is common to all the instances of it. When this is referred to an individual Subject, it is treated as a function of the Subject. And it is consciousness *as function* of an individual conscious being that is examined in psychology. The phenomena are the very same as those analysed by philosophy in its first and second Rubrics; sensations, feelings, pleasure and pain, emotions, thoughts, volitions, &c., &c., are all analysed again by psychology, but in relation to that real condition, agent or agency, which, be it what it may, *has* those moments of reflective perception through experiencing them, and whose agency is coloured and distinguished by them into the various modes which we call its several functions. Feeling, sensation, emotion, volition, thought, memory, recollection, and so on, are all words importing functions. Psychology analyses as functions of the mind what philosophy analyses as process-content of experience.

IV.

Now perhaps it may seem that, when philosophy has

provided for the complete analysis of consciousness or experience as such, under its first and second Rubrics, and for the incorporation of the whole series of the positive sciences with philosophy, by means of the conception of real condition or genesis under the third, its task is ended. But this would really leave its special purpose, a Rationale of the Universe so far as attainable by man, unattempted. There yet remains the work of putting together the results acquired both by philosophy and by the positive sciences (so far as the latter bear upon the problem), of taking their total *facit*, and exhibiting the conclusion in the form of a general estimate, both of what we know and what we do not know, of the Sum of Things. The fourth and last Rubric I accordingly entitle THE CONSTRUCTIVE BRANCH OF PHILOSOPHY.

And first with regard to man. The analysis of his feelings, reasonings and volitions has been here attributed to philosophy, that of the *de facto* conditioning of them to psychology. Now it will be admitted that all the questions of Ethic have a twofold root, one in the estimate of the comparative worth and moral dignity of the feelings, ideas and purposes which enter into the conduct of life, the other in the comparative strength and efficacy of these same feelings, ideas and purposes considered as motives, in combination with the natural tendencies and appetitions of man as an animal being. It is essential in Ethic to keep these two roots distinct; it is equally essential, while doing so, to observe and maintain their living combination. This is facilitated by the method now proposed. The separation of the first two Rubrics from the third provides for the first requirement, the addition of the fourth provides for the second. Ethic as a whole we must accordingly assign to the Constructive Branch of philosophy, taking its *data* from the results of philosophical and psychological analysis under the preceding Rubrics.

The question whether wholly disinterested benevolence is possible, or whether all forms of altruism are not ultimately refined or disguised egoism, receives an easy solution, when we have learnt to distinguish between self as referred to reflective perception and self as referred to the psychological Subject. The former self may surely be wholly detached from the self-interests of the latter.

Again, the question of Free-will is really a question of genesis, a question of function, a question for psychology. But how often do we see its advocates endeavour to prove its reality by giving it a definition drawn from purely philoso-

phical considerations, defining it, for instance, as the action of the true or higher self as opposed to the lower; or again, as the action of the whole of Nature distinguished from the mechanical action of part upon part. What really has to be shown is, that action, as action simply, can be free. Freedom is a *mode* of action. It is no use to call in a special agent *ad hoc*, whose action is freedom simply. Yet supposing freedom of choice, or free-will, established, we have still only the preliminary of Ethic, only the psychological or functional part of Conduct. The question of right or wrong still remains. The strength of the so-called English or Utilitarian school of Ethic consists in an exclusive attention to the psychological or functional view of the phenomena of conduct. From that point of view alone nothing that is *de jure*, but only what is *de facto*, can possibly be seen. Questions of what is right or wrong, and why, can be answered only by purely philosophical analysis. Thus here also the method now proposed seems appropriate to the problem dealt with.

A similar position to that held by the question of freedom in the moral world is held in the world of Nature by the questions of Contingency and Necessity, Possibility and Impossibility. To answer these in application to the world requires not only subjective analysis of the phenomena of consciousness, in which these conceptions have their roots as conceptions, but also a knowledge of the facts to which they are applicable, as these facts are given by the positive sciences. The combination of these two analyses is their application to the world as a whole. The two senses of necessity, (1) uniform law and (2) superior force, have been the source of endless confusion, especially in application to moral freedom; and merely pointing out its source is by no means the same thing as remedying the confusion. The question remains, what is involved in the union of law and force in the world which we actually know, when it is conceived as a process of as yet unfinished evolution?

Similarly the question whether the universe is to be considered as infinite or as absolute, that is, a rounded off whole, has its roots in subjective analysis on the one side, and in observation of nature on the other. Without the combination of both, no application of them to the universe is possible. It is the use of the forms of *perception*, Time and Space, by the positive sciences, or, in other words, their laying Mathematic (not Logic) at the basis of their whole method, which gives those sciences their predominant importance in experience. They explain things as they are

perceivable, that is, as they *exist*, and not merely as they are *thinkable in concepts;* they explain the genesis and relations of natural objects in perceptual order prior to its modification by any re-active thought, except the effort of attention. Time is the *continuum* at the basis of all *change;* time and space together at the basis of all *motion*. The ideas of beginning and end, of limit and boundary, of division of *continua* without residuum, as, *e.g.*, lines in geometry by mathematical points, belong to subjective analysis. The idea of Quantity itself depends on the fact that percepts are *continua* in time and space, not this fact on the idea of quantity. The Kantian Antinomies must find their solution, if at all, in the application of the subjective analysis of these ideas to the world as positively known to us.

Another great question which demands, first the distinction, and secondly the combination, of subjective analysis with positive science is that of Teleology. In the first place, what is meant by a *Telos?* Its meaning is drawn partly at least from practice;—something desirable, a purpose aimed at. Is there any purpose in this sense discoverable in the universe as a whole? Or is consistent intelligibility alone sufficient to satisfy the meaning of the term? A law of a sequence of events, simply as a law, connects its end with its beginning, so that, if the universe is a process in time subject to law, it would seem that its end must be implied in its beginning, quite irrespective of desirability. Yet this threatens to abolish the idea of a time-process altogether, and along with it that of a *telos*.

Again, are we to consider the *telos*, in either of these senses, as contributing to condition the actual order of events? It would seem that *telos* in the sense of purpose aimed at could not do so, unless a Subject of the purpose was discoverable. It is only as *foreseen* that a result can be readily conceived as a *motive*, that is, an efficient condition of action. Hence, perhaps, it is that positive physical and physiological science restricts itself to investigating the *de facto* or efficient order of events, refusing to speak of final causes at all. Granting that causes may have a final character, yet, unless and until they appear as efficient causes, they have no place in science. True, this rule can hardly be said to be observed by psychology as understood at present. Indeed, the current idea of the Subject or Ego is that of an agent acting from purpose, a kind of action in which the idea of the purpose, simply as an idea in consciousness, is a necessary link in the chain of real causation, and must therefore be conceived as possessing energy. That is to say, the current psychology

assumes that consciousness as such has energy, in assuming the action of final causes as something *per se notum*. Where it is something *per se notum*, and indeed an indisputable fact, is in the domain of common sense; it cannot be said to be so in science. This remark alone would suffice, in my opinion, to show the necessity of some such method as the present, in which subjective analysis should have its distinct place and its due weight secured to it.

I cannot here do more than indicate a few of the more important problems, or rather directions in which problems lie, the proper treatment of which demands a clear distinction of subjective analysis and scientific investigation, followed by its necessary corollary, their combination in what I call a Constructive Branch of Philosophy. What is very often understood by *Philosophy* is little more than this single branch, isolated from its necessary preliminaries, and based on some supposed self-evident intuitions or necessary axioms. The really fundamental work of philosophy lies in my first and second Rubrics, which it will be remembered are marked off from the third by the guiding principle of the method, namely, the subordination, in philosophy, of questions of genesis to questions of essence.

One more class of questions, however, it is impossible to omit mentioning, both on account of its intrinsic interest, and because it in a manner gathers up and comprises under it all those which have hitherto been mentioned in the present Rubric. I mean the class of questions relating to Religion. When we put together the questions of Ethic, that is, those which relate to man's practice as distinguished from his knowledge, with those which relate to the world in which he finds himself, and consider what we know or can make out of the universe so composed, the universe with man as its highest positively known constituent, we are standing, as it were, at a higher level or plane of construction than in taking the two former classes of questions separately. It is a kind of Teleology of the universe, man included, that we are then considering the possibility of attempting. The questions of contingency and necessity, of possibility and impossibility, of infinity or absoluteness, are therein comprised as subsidiaries; and the teleology is considered as traceable, if at all, in the purpose or system of purposes for which man as representative of the whole is designed.

Here it is plain that we are on ethical ground; it is predominantly a practical problem that we have before us. But at the same time it is Ethic carried to a higher level, Ethic

in presence of the whole imaginable or surmisable universe, not merely in presence of mundane and social relationships. The attitude and frame of mind naturally inspired by considerations of this kind, quite irrespective of demonstrable knowledge, is the religious attitude and frame of mind. The possibility, and indeed the necessity of it, seems to me to be founded in the function of all distinct consciousness, that of reflective perception, which, as we have seen, is the cardinal fact of experience and the basis of philosophy. Experiencing is always looking back upon consciousness while moving forward into the unexperienced future. But the mental attitude of expecting the future does not depend upon what or how much we are entitled to anticipate of its nature from our knowledge of the past. Supposing our grounds for a speculative knowledge of the universe, beyond a certain limit, to fail us, we have still a knowledge of what it is ethically desirable for ourselves to do and to be, whether within that limit or beyond it.

I say *if* our speculative knowledge fails us beyond a certain limit, because it would be out of place here to argue the question, whether it does so or not. If it does not, and we can consequently frame a positive conception of the nature of that Power which sustains and governs the universe in its totality, our philosophy will belong to what Prof. Fraser, in his excellent little work *Berkeley* (pt. iii. ch. 4) has well called Gnosticism. If, on the contrary, it fails to enable us to frame such a conception, then we shall have what the same writer calls a Faith-philosophy. Only that here, before adopting so convenient a catchword, it will be necessary to distinguish two very different modes of thought to which at first sight it seems applicable. One is where faith is made to supply the deficiency of evidence in support of some definite conception. The other is where it means practical trust in the universal and unseen power, beyond the reach of any definite conception at all. Prof. Fraser, in speaking of our ideas as requiring to be "cemented" by faith (*ibid.*, p. 232), would seem to be contemplating the former kind only. But faith can never legitimately be among the premisses of philosophy, though it may be among its conclusions.

The ideas in which a faith, which is the conclusion of philosophy, may be embodied would then appear as purely anthropomorphic symbols, enabling us practically to think of it and realise it. They would be objective thoughts incapable of positively representing the object thought of, because incapable (by the supposition) of being completely determined as

objective thoughts. Not that this incommensurability with their object thought of would imply a non-phenomenal nature in the latter. This is forbidden by the nature of reflective perception, which is the central fact on which all philosophy and experience are built. The positive content of the object thought of, not its existence relatively to ourselves, is what is beyond the grasp of speculation. It must be characterised as unknown, but not unknowable *a parte rei*, provided adequate powers of knowing were supposed. The distinction between a noumenal world of *real* reality and a phenomenal world of *apparent* reality, the former being the hidden ground of the latter, and existing (as it is sometimes expressed) "out of time altogether," is a distinction impossible to sustain as true, seeing that the mere thinking of such an existence, so as to draw the distinction, is *eo ipso* bringing it within the panorama of consciousness, and rendering it phenomenal to reflection. The same thing cannot, in respect of its existence, at once belong and not belong to the panorama.

II.—ON THE NATURE AND FUNCTIONS OF A COMPLETE SYMBOLIC LANGUAGE.

By Sophie Bryant, D.Sc.

Symbolic Logic has, of late years, been issuing slowly from the obscurity in which it had remained so long; and Boole's great work on the subject now receives a fair share of attention from the logicians at least, though the mathematicians are still somewhat behindhand in offers of assistance for its further development, and the general public of educated persons has hardly begun to find out its fascinations. Boole has successors, and these we may consider as of four kinds: (1) critics tending to become opponents, like the late Professor Jevons, (2) semi-disciples, as for instance Mr. C. S. Peirce, who partially accept his methods, but reject or ignore his principles, by an arbitrary use of non-mathematical, in preference to mathematical, symbols, (3) independent successors, like Mr. McColl, who differ from him partly, but more by accident than otherwise, and (4) genuine followers, such as Dr. Venn, whose work mainly consists in developing and supplementing Boole's own work, on the lines which he himself laid down.

In a sense this is satisfactory: it is well that there should be diversity of thinking. It is not well, however, that there should be heterogeneity of result. Even a slight study of the literature of the subject shows that we are threatened by an increasing variety of symbolic procedure, some of it more or less arbitrary; and this is not satisfactory at all. It becomes, therefore, a matter of practical, as well as theoretical, importance that such definite inquiry into the nature of symbolic language should be made as, besides other results, may lead to the establishment of tests for the legitimacy of any proposed symbolic method. Symbolic language, like any common language, has natural laws of growth, in conformity with which it extends its application from one department of thought to another. A consciousness of these natural laws is more necessary in this case than in others, because the growth proceeds with a more deliberate invention on the part of a few individual thinkers, and individual thinkers are liable to eccentricity when they invent what can be invented arbitrarily, without consciousness of a rule of reason that ought to be their guide.

The argument of the following pages is in the direction of such inquiry; and the result will, I believe, be found to be a further realisation of Boole's fundamental idea, that the language of mathematics is naturally the universal language of thought, and that general logic, therefore, is mathematics with all conceptions of *quantity* struck out. That this is Boole's idea becomes perfectly evident once we are clear as to the sense in which he uses the term mathematics; but he has not expressed himself so as to make misunderstanding impossible on this point, and has, in consequence, been understood by Prof. Jevons and others, to make general logic a branch of the particular logic of quantity, with which the name mathematics is specially associated. In Boole's sense, however,—and he does not stand alone in this respect among mathematicians — mathematics *includes* ordinary quantitative mathematics, but its field is far from being wholly covered thereby. Hence, it is open to the mathematician, as such, to investigate other developments of formal truth, and to bring these within the domain of general mathematics, if he can. This is just what the author of *The Laws of Thought* set himself to do: it was his aim to show that qualitative logic and quantitative mathematics could be treated as departments of the same formal science, and he called that general formal science by the name of mathematics. We may call it general logic, if we please, without in the least affecting Boole's position; for that position consists simply in the assertion that mathematical form is the true type of logical form in general.

Boole's method of establishing this position was by comparison of ordinary logic with ordinary mathematics, and the development of the former on the lines of the latter. Our present inquiry into the fundamental nature of symbolic language, as such, should lead, if it lead us anywhere, to the source of that remarkable analogy which Boole discovered and developed, but did not explain.

An inquiry into the nature of symbolic language is an inquiry into the nature of Language as distinguished from languages. These partake of racial, and even individual, peculiarities; whereas Language with a capital L should be conceived as the medium, more or less perfect, for thought as such, namely as universal thought. We must first decide then on some principle, or principles, universally agreed to, by which we can all pledge ourselves to stand or fall in our choice of symbols and symbolic procedure. If afterwards we offend against this principle, our symbolic language will be self-judged as peculiar to ourselves, sub-

jective not objective, an individual aberration of speech just as an hallucination is of perception. One such principle will be readily admitted, as that which indeed governs all sound language-growth, the principle, namely, that a *true* language must be throughout perfectly *consistent* with itself—that no inconsistent results shall be found in it. This being granted, we have further to inquire within what 'universe of discourse' our symbols must yield this consistency, whether within that of the special logic—class-logic suppose—to which they apply, or within the whole universe—or sum of universes—of logical discourse, quantitative and qualitative both. And, in the latter case, we have further to inquire whether this consistency is to be negative merely, implying the absence of symbolic contradiction, or to be positive also, implying identity of form wherever identity of process in the various regions of discourse can be made out. Most thinkers will agree that these questions fairly put admit of only one answer; for, since to think is to become more consistent intellectually, the law of the thinker's mind, as such, is, other things being equal, to choose the maximum of consistency at every point of his course. Some indeed may doubt that any such language as that suggested, universally applicable and perfectly self-consistent at once, can be found or invented; but it will be generally admitted that if such a language can be found it must be chosen, and until it is found its conception as the final standard will enable us to decide on the relative merits of any proposed symbolic language, by the test of approximation to perfect consistency within the complete universe of discourse. If there be a symbolic logic applicable to all universes of discourse, from such a logic clearly all special logics should be deduced; and, in any case, it may be assumed, as the practical first principle we are in search of, that *symbols and methods ought to be chosen so as to yield the maximum of consistency throughout logical discourse.*

A little reflection makes it plain that the difference between one branch of logic and another can be only partial and strictly limited to the subject-matter. The thinking that constitutes a quantity as a number of units differs from the mental act which selects a class of similars from a multifarious collection, and from that which fixes attention upon a special property of a variously qualified object. But, after the special intellectual acts have been performed which result in the ideas of a number, a class and a quality respectively, the rest of the thinking that can be done to one of these subject-matters can be done to any other just

as well, though it does not follow that this thinking will be equally fruitful in every case.

Number is the thinking of magnitude as a synthesis of similar parts which are called units; but, originally and fundamentally, number is something simpler than this. It is the synthesis of objects in the abstract without regard to their likeness or difference, as a 'many' of 'ones' that may be like or may be unlike, but in numbering are simply discriminated as separate ones. A numerical symbol, such as 8, stands for a definite numerical synthesis in the symbolic language of arithmetic; and an algebraical symbol as a stands for any numerical synthesis whatsoever. The term-symbols of common mathematics are all of this kind; but the term-symbols of higher mathematics introduce a new conception. These are known as symbols of operation, and stand for definite operations, simple or compound, performed on numerical syntheses. A further step is taken in the new developments of universal or multiple algebra, with which the names of Professors Cayley and Sylvester are associated, in which we have instances of single symbols for complex logical relations of any kind between numbers subject only to the condition of being connected by a single system of linear equations. These three algebras (or four if we distinguish arithmetic), are distinguished by the difference between their subject-matters as denoted by their term-symbols, but they all deal with number finally. In class-logic, on the other hand, a term-symbol stands for a class of objects; and in logic of quality proper, dealing with the meaning in intension rather than extension of its terms, each term-symbol would stand for a quality or group of qualities. In general logic a term-symbol would be susceptible of any one of the above interpretations: it would stand for any operation on any object of apprehension, such operation being considered in relation to its result as constituting a new object of apprehension or subject-matter. Considered in relation to this general logic, each special logic would emerge from it according to the special meanings assigned to its term-symbols, which are symbols of number, operations on number, or relations between number, in mathematics, symbols of classes in logic of extension, symbols of quality in logic of intension, and so on if there should be any more logics to consider.

The subject-matter denoted by the term-symbols has to be thought further into shape, and the operations of so thinking it are represented by what Dr. Venn calls symbols of operation. In mathematics, these operations are addition,

multiplication, their inverses, and equation: in class-logic they are aggregation, compounding of class reference, as when A is taken to be both an X and a Y, their inverses, and identification. On the analogy of these two sets of operations so much has been written and said that the assertion of their *identity*—an identity obscured only by difference of subject-matter—need not appear very startling: and if this assertion be established, there can be no doubt of its practical importance, since it yields at once the inference that, notwithstanding the specialised associations of number with which the vocabulary of mathematics is beset, that vocabulary consists of a complete set of symbols for fundamental intellectual operations without distinction of quantity from quality. Think out of mathematical symbols all the associated mathematics, and general logic stands revealed. Think into this conditions of quality, and qualitative logic is the result. That this was Boole's conception there can, I think, be no doubt; he no more made logic out to be a particular case of ordinary mathematics than the geometrician makes out that the ellipse is a particular case of the circle when he proves by projection a property of the former from one of the latter. The arguments are indeed very similar; just as the non-metric properties of the circle remain true for the ellipse into which it is projected, so the non-quantitative laws of the language used in mathematics are unaltered by projection, if I may so call it, of mathematical into logical thought. It is our present business to investigate the nature of those general logical operations with the special forms of which, as applied to quantity and quality, we are already familiar. The identity of logical and mathematical operations will thus be explained as well as established.

Before proceeding finally towards this business, it is necessary to make and verify the assertion that *all symbols are in their fundamental meaning symbols of operation*. Boole suggests this so forcibly that one cannot but wonder at his failure to carry the suggestion out. In *The Mathematical Analysis of Logic*, written, as he tells us, six weeks after his first conception of the subject, he deliberately defines the term-symbol x as representing the *operation of selecting* Xs from any object, as for instance the universe, on which it operates; and his view, throughout, for logical term-symbols (with him always class-symbols) is that they *represent* operations and *denote* the results of those operations. But though this meaning appears evidently enough in *The Laws of Thought* to one who is aware of it already from a

study of the earlier treatise, even a careful reader may, if unaware, omit to lay any stress upon it. Indeed, the later work throughout shows signs that the writer had ceased to attach its initial importance to the definition.

Again, in the chapter on "Symbolic Methods" in his *Differential Equations* we find this passage :—

"The term symbolical is, by a restriction of its wider meaning, applied more peculiarly to those methods in analysis in which *operations, separated by a mental abstraction from the subjects on which they are performed,* are expressed by symbols in whose laws the laws of the operations themselves are represented.

"Thus $\frac{du}{dx}$ is written symbolically in the form $\frac{d}{dx} . u$, the symbol $\frac{d}{dx}$ denoting an operation of which u is the subject. In thus expressing an operation by a symbol, in studying the laws of that symbol, and in founding processes and methods upon those laws we introduce no strange or novel principle of Language ; for *it is the very office of Language to express by symbols the procedure of Thought.*"[1]

And in the same chapter he proceeds to show that, for these mathematical symbols of operation, the distributive, the commutative and the index laws—all the fundamental mathematical laws—hold good, just as he shows that for his logical operators the two first of these are true.

Boole, however, goes no further towards the conclusion that all term-symbols are operators in the same sense, with necessarily identical laws of combination, though the hints at this conclusion thrown out by the striking *analogies of result* which he discovers are broad indeed. Perhaps he had enough to do in developing these results. The following passage from the chapter above quoted places it beyond doubt that he compared, but stopped short at that point and did not generalise.

"If a convention, it is at least a very natural one that we should express an operation performed on a subject by attaching, in some way, the symbol denoting the operation to the symbol denoting the subject. The order of writing in that family of languages to which our own belongs has doubtless determined the mode of connexion actually adopted, and which is the same as if the symbol of operation were a symbol of quantity employed as a co-efficient or multiplier. *It comes to pass,* moreover, that the formal laws of combination, in the direct cases investigated in Article 2, prove to be the same for the symbol $\frac{d}{dx}$ as for a co-efficient or multiplier."

This "coming to pass" would be curious indeed, if that were all.

It is clear that the close connexion in character between

[1] The italics are mine.

the logical class-symbols and the mathematical symbols of operation, as conceived by Boole and others before and after him, and the glaring discontinuity, as to the conception of term-symbols, of the ordinary algebra with the algebra of operations, point to a defect of theory somewhere: and if there is to be harmony between the three, the defect is in the ordinary algebra. If the term-symbols in common algebra and arithmetic can be interpreted as symbols of operation, and the conception of Boole be accepted with respect to those of symbolic class-logic, then, and only then, can perfect unity of conception prevail in all the departments.

Are we then to consider that x in algebra represents the operation of synthesising x units, and denotes the result of that operation—the number x? Does 4 represent the operation of counting four units, and denote as result the group of four? The question may seem frivolous, involving a barren distinction between operation and result. But, whether barren or not, the distinction is implicit in every element of thought or intellectual activity. Without thought in this wide sense there is no experience, without experience there is no thought. Without a subject-matter to operate on there is no operation, without an operation to constitute it there is no subject-matter. An experience is the result of an operation, and a real, as distinguished from an unreal, subject-matter is the result of a logical operation on a previous real result. The experience is the somewhat presented to the perceiving subject as comparatively passive, which is at once the psychological contrast and correlate of the operation performed on it by the thinking subject as active. The effect of this operation is an alteration of experience, another somewhat on which further operation may be performed, and so on. As to the beginning of this operating process and its primary subject-matter before it begins, we may be content for the present to note that, being of necessity beyond experience, it is unknowable like all psychological beginnings, though that is no reason why there should not be an appropriate mode of symbolising it, as the zero, or infinitesimal, of intellectual operation.

Since the distinction is real and fundamental, it cannot be meaningless to say that in all cases the true meaning of a symbol is, not experience, but thought—not result, but operation; and that *the true aim of logical thought is not so much the identification of experiences as the equivaluation of operations.* This follows, as Boole suggests, from the very nature of language as essentially a means for the represen-

tation of that which cannot directly be presented in experience, namely, thought. Operations of thought cannot be presented in experience; hence the need for symbols which can be presented and which stand for them. All general terms, for example, are symbols of conceptions, a conception being a mental operation objectified in a name, denoting any one of a certain group of objects and connoting a certain group of attributes. The *raison d'être* of a symbol is, indeed, its use as a symbol of operation; and the advantage of a language purely symbolic, like algebra, is that it enables us in our thinking to free the operation from its complex, and sometimes vast, accompaniment of experience, and thus the more effectively to consider the laws of its combination with other operations.

The rejection of this view, that symbols should always be regarded as symbols of operation, involves, as has been shown, a failure of consistency; and our test for the soundness of any interpretation of symbols is that it should secure the maximum of consistency. In the higher developments of the mathematical calculus we are driven upon it, as before observed. If we reject it then in ordinary mathematics, and in logic generally, we are involved in the relative inconsistency of accepting two distinct kinds of interpretation for similar symbols, which yet by some curious coincidence follow the same laws of combination. Nor is this all: we are, moreover, frequently involved in the glaring inconsistency of mixing up results with operations in the same equation, as in this case—

$$\left(a + \frac{d}{dx}\right)\left(b + \frac{d}{dx}\right) u = ab + (a + b)\frac{du}{dx} + \frac{d^2u}{dx^2}.$$

This consideration is conclusive as regards the domain of mathematics; and probably most, if not all, mathematicians would say at once that they never thought anything else. Our rule of attaining the maximum of consistency compels us to extend the interpretation to all logic.

One advantage of this view lies in the perfect way in which it enables us to express the fundamental truth, that from diversity of logical operation there issues identity of logical result. In the expression $x = y$, x and y represent diverse operations, identified in result and result only. The results coincide, though the thinking of them differs. Again $2 \times 4 = 8$ means that the operation of synthesising groups of four, and from these as complex units groups of two, results in the formation of complex units identical with those which result from the synthetic operation 8. If we adopt the

looser interpretation—x is the same as y, 2×4 is the same in magnitude as 8—we lose the emphasis of distinction between our terms, which is of such fundamental importance in thinking them. While we identify experiences, we have also, in order that our comprehension of the experience-whole may be clear and vital, to distinguish between the operations which constitute them. The essential business of thinking is not, indeed, to identify experiences but to develop, or analyse, intellectual operations: and the development of an operation is naturally symbolised, as in mathematics, by expansion in a series of operations to which it is *equivalent*.

Since all symbols are to be interpreted as symbols of operation, the generally accepted distinction made by Dr. Venn between term-symbols and symbols of operation seems, at first sight, to fall to the ground. This, however, is not so; the distinction remains and is already in part explained, as that between symbols of operation constituting special subject-matter and general symbols of operation dealing with subject-matter already constituted. A term-symbol represents a special operation *for* a special result; the other symbols represent general operations which may be performed *on* that result. The distinction remains, and is clearly a fundamental one.

We have already considered the character of the special operations represented by the term-symbols of algebra and of logic respectively, but it may be well to sum up this part of the subject more definitely before we go on to define precisely the general operations which make up our thinking on their results.

In arithmetic the symbol 1 represents the act of fixing attention on, or apprehending, something considered as simple and with no regard to quality; the symbol 2 represents the act of synthesising two units and apprehending them as a complex unity in which the distinction of twoness is definitely implied. Similarly, all numerical symbols represent acts of synthesis into which differences of quality do not enter, the complex unities or numbers being, therefore, the result for apprehension which the symbols may be said to *denote*. Numbers thus represent particular numerical operations of a certain kind. Algebraical term-symbols in the same way represent *all* numerical operations of that kind indifferently. Logical term-symbols in general represent any operation which culminates in an act of attention to its result. The operation may be that of selecting As from the universe as an object of attention, in which case we have

Boole's selective symbol a with the formation of the A-class as its result; or the operation may be that of discriminating as an object of attention the quality a in an A, a being a term-symbol in the logic of intension.

Let us now consider the general operations which can be performed on the objects of attention thus variously constituted.

I. Results may be aggregated to form a new result. Attention may be expanded to include two or more of the complex unities of number, and then contracted to consolidate them to unity again. This is addition in arithmetic and algebra. In general it is *synthesis by simple apprehension*, the gathering up of a manifold into one. Synthesis of numerical results we are familiar with and symbolise by the sign $+$. Classes, too, *i.e.*, the results of classing, may be synthesised in apprehension, or, as we say, aggregated, into a complex class, such as result of operation $x + y$, which includes all the Xs and all the Ys. So also qualities, the results of qualitative abstraction, may be aggregated into a complex quality $\alpha + \beta$, which reads as α and β. Thus, for example,

$$(1) \quad 2 + 4 = 6$$

means that result of operation 2 aggregated with result of operation 4 is identical with result of operation 6, or operation 2 *and* operation 4 is equivalent to operation 6.

$$(2) \quad a + b = c,$$

in logic of extension, means that result of class-operation a aggregated with result of class-operation b is identical with result of class-operation c.

$$(3) \quad \alpha + \beta = \gamma,$$

in logic of intension, means that the operations of qualification α and β are, in aggregation of result, equivalent to operation γ.

Inverse to aggregation, or synthesis by simple apprehension, is disjunction, or *analysis by simple apprehension*. The direct symbolic representation of this is the equation of the aggregate written backwards or converted—

$$c = a + b.$$

The act of disjunction, however, must be conceived as taking place by a concentration of attention on one part of the whole experience under consideration, and withdrawal from the other parts, the persistence of those other parts being, however, recognised. Here we have a contraction, just as in the other case we had an expansion of apprehension. First the total c is being attended to; then attention contracts

and is withdrawn from the part b. The operation is symbolised as $c - b$, and is equivalent to the operation a.

$$c - b = a.$$

Here we have the performance of operations c and b, with disjunction of the b-result from the c-result, the final result being equated to the a-result. Just so in the example

$$6 - 2 = 4$$

we have operations 6 and 2 with disjunction of the 2-result from the 6-result, this being equivalent to the 4-result.

It should be noted that these cases supply good examples of the fact that the act of analysis implies as many operations as it has terms. The b-result cannot be separated without performance of the operation b. The example with numbers is very clear; 2 cannot be taken from 6 unless, having first counted two, we then count 4 on to it as its complement to make up 6.

Aggregation, or synthesis by simple apprehension, is performed in arithmetic under the sign +, while disjunction, or analysis by simple apprehension, is performed under the sign −. Hence, these being perfectly general operations in all branches of logical thinking, + and − are their appropriate symbols. And just as in algebra, so in all known logics, including calculus of operations, and for identical reasons, the following laws are true:—

(1) $a + b = b + a$, as, *e.g.*, $\left(\frac{d}{dx} + \frac{d}{dy}\right)u = \left(\frac{d}{dy} + \frac{d}{dx}\right)u$,

one case of the commutative law, which may be stated thus:—the order of apprehension is logically indifferent when operations are aggregated.

(2) $a - b = -b + a$,

or:—when one experience is apprehended by attention and another cast out, it is logically (not psychologically) indifferent in which order this is done. Thus, for instance, the result is the same whether all the As in the universe are selected and the Bs cast out of consideration, or all the Bs in the universe cast out of consideration first and then the As selected.

(3) If $a = b$,

$$a + c = b + c,$$
$$\text{and } a - c = b - c,$$

or:—if the same operation is aggregated with, or disjoined from, equivalent operations, the results are identical. This axiom includes the numerical axiom as a particular case.

II. The mathematical operation next to be considered is that of multiplication. By a fine instinct apparently, rather than for any reason of which they were conscious, logicians have mostly agreed to consider this as analogous to composition of class-reference in ordinary logic. For example, xy is taken to denote objects that are at once Xs and Ys. From our point of view, however, the *identity* of these two operations is not difficult to prove. And here again a reminder may not be needless that three fields of thought at least, ordinarily conceived as distinct, have to be reconciled, namely, common algebra, including arithmetic, calculus of operations, and class-logic. The maximum of consistency so far is attained if our interpretation accounts equally well for—

(1) 2×4 in arithmetic,

(2) $\frac{d}{dx} \cdot \left(\frac{d}{dy}\right) . u$ in calculus of operations,

(3) xy in class-logic.

This interpretation is *operation on the result of previous operation.*

(1) Perform the act of synthesis 4. Considering this as a new unit, perform on it with other like units the act of synthesis 2. The result is the complex unity 8. On the result of operation 4 operation 2 has been performed: in the language of the symbolic algebra, the result of operation 4 has become the subject of operation 2. Seen in this light, the fact appears striking that mathematicians should agree to drop the sign of multiplication, in writing $2 . 4$, and in algebra ab without even the dot, this form of expression being so much more than any other suggestive of 2 operating on 4 or a on b.

(2) Perform the operation $\frac{d}{dy}$ on the subject u (this subject being, in our sense, the result of some previous operation), and on this further result perform the operation $\frac{d}{dx}$. This is the meaning assigned already by the mathematicians.

(3) Select from the universe all the Xs, with result the X-class. From this result select all the Ys. In other words, on the result of x operate with y. The final result is the class of Xs that are also Ys; and the appropriate symbol of the *compound* operation is xy.

Or, if our problem be with intensive logic, perform the

act of qualitative abstraction α with result the conception of a quality. Operate on this result with the act of qualitative abstraction β, and the result is the conception of a *qualified quality*, as, for instance, whitish greenness, selfish affectionateness, attractive ugliness. The symbol for this qualification of qualification is $\alpha\beta$.

Operation of operation may be called synthesis by means of thought, or *synthesis of operation*. Hitherto, attention has been limited almost entirely to the numerical operations of arithmetic and common algebra, the operations of the calculus, and the logical operations of classifying and qualifying. But logical operation is by no means exhausted in the compilation of this list. The symbol ab may be taken to represent any logical operation whatsoever, a operating on the result of any previous operation b. Both a and b may be complex, or compound, or both. There is one well-defined example of a logic with such complex and compound term-symbols, in the multiple algebra of which mention has already been made. So far as I know, there is only this one. Moreover, a and b might be operations differing in nature to some extent.

Inverse to synthesis of operation, is *analysis of operation* into the equivalent series of simpler operations. In arithmetic this is factorisation, *e.g.*,

$$12 = 2 \times 6 = 2 \times 2 \times 3.$$

In logic generally it is *development* of operation, *e.g.*,

$$a = xyc = xyzw.$$

This is the analysis of thought as thought, sharply distinguished from, though frequently confused with, the analysis of experience as the result of thought. Experience is developed by expansion into a series of terms symbolically united by the sign $+$. Thought is developed by resolution into logical factors. Beginners in the study of mathematics often suffer from confusion between the cases to which addition and multiplication are respectively applicable. This is only a particular instance of confusion between analysis of experience and resolution of thought on the one hand, between synthesis of result and synthesis of operation on the other.

It should be noticed that, while factorisation is the strict inverse of multiplication, and therefore, like all inverses, indefinite, division is the inverse process, one factor being given and the other required. In this case a question is asked.

(1) In arithmetic, $\frac{8}{4}$ asks the question: What number is

that which operated on, *i.e.*, multiplied by, 4 gives result 8?

(2) In logic of extension, $\frac{a}{b}$ asks the question: What class is that from which if the b's be selected the result is the class a?

(3) In logic of intension, $\frac{a}{\beta}$ asks the question: What quality is that which if it be qualified by β becomes a?

Now the process of factorisation may very well take place by asking a series of these questions. In psychological analysis instances abound. Here is a complex mental operation c; required to find what it reduces to when the modification effected *in it* by operation b is taken off.[1] In other words, if b had not operated, what would there be in the place of c? For instance, suppose this question put: If laws of association had not operated, what would we have in place of our intelligible experience? And if anyone be understood to assign the answer, Nothing, the proposition might be symbolised thus :—

$$\frac{E}{A} = 0.$$

From this, by the way, the mathematician would be apt to infer that A = infinity, *i.e.*, that the laws of association have an infinite importance; and, on consideration, the logician would probably feel bound to agree that such is the necessary inference, whether with addition or not of the Euclidian remark, 'which is absurd'.

It has now, I think, been established with sufficient evidence that the process of arithmetical multiplication is a particular case of that logical synthesis of operations, the first clear conception of which we may trace to the calculus of operations, and that, therefore, the sign of multiplication, or better still no sign, should represent *operative synthesis* in all cases. For the symbols of mathematics are always to be preferred when they apply, since they are already established securely in the language of educated humanity. Similarly, factorisation being a particular case of operative analysis, and division of operative taking off which is the common means of *operative analysis*, the mathematical symbols of factorisation and division are the proper symbols of these operations.

[1] I distinguish taking *off* an operation from taking *away* an experience just as division is distinguished from subtraction.

In common algebra, in the ordinary algebra of operations, and in qualitative logic so far as investigated up to the present, the following laws are true:—

$$(1)\ ab = ba,$$

i.e., the *commutative law*, which asserts that in the composition of operations the order of operation is *logically* indifferent.

$$(2)\ a\,(b + c) = ab + ac,$$

i.e., the *associative law*, which asserts that operation on an aggregate is equivalent to aggregation of the results of that operation on the members of the aggregate. In other words, it is logically indifferent whether we aggregate first and operate afterwards, or operate first and aggregate afterwards —whether we add experiences and then think them, or think them first and then add them.

$$(3)\ \text{If } a = b,$$
$$ca = cb, \text{ and } \frac{a}{c} = \frac{b}{c},$$

i.e., if the same operation is performed on, or taken off equivalent operations, the results are identical. The same operation on identical results yields identical results, and operations on which the same operation produces identical results are equivalent.

To the second and third of these symbolic laws no exception in any employment of symbolic procedure has ever been made; and the second certainly appears to be the expression of a universal law of logical thought, though this cannot be said of the third, which stands on a different footing. To the first law, however, large exceptions have been already made by the investigation of various algebraic realms in which the associative, but not the commutative, law holds good. These associative algebras, as they are called, are purely logical or formal, developed without application to any special matter of thought. They illustrate forcibly the truth, which after all is evident *a priori*, that logical operations, as logical simply, are not commutative, and possess this property of commutativeness or not according to their material constitution in any given case. Here an interesting field of inquiry suggests itself, namely, that of the conditions on which the truth of the law depends; but we must abstain from that inquiry at present.

Synthesis and analysis of experience, synthesis and analysis of thought,—these are the *four fundamental logical operations;* and we have besides the two subsidiary operations by which

analysis is carried on, namely, the taking away of experiences and the taking off of thought. These enter alike into all special departments of logic, which are distinguished from one another by subject-matter and the conditions imposed by its constitution. The conditions depend on the character of the mental operations represented by the term-symbols. If these are quantitative operations, the logic is mathematics in the ordinary sense; if they are operations of classification, it is class-logic, or logic of extension; and if they are operations of qualification, it is logic of intension. These two last-named operations are not independent, however, but are distinguished only as aspects of the fundamental and initial act of qualitative as distinguished from quantitative thought. Hence there arises the conception of a double logic, rather than two logics, of extension and intension; since this initial act is one double act, rather than two acts. The connexion between the symbolic language of these two aspects of logic, and their union in one symbolic scheme, is a subject of inquiry of the highest interest, into which, however, it is not proposed to enter now.

The acts of identifying the results of these operations of classification and qualification are judgments, extensive or intensive. These may be taken as secondary subjects of operation, and a secondary operation of equivaluation performed on them. This secondary operation is logical inference. Thus x, y, z may be taken to represent judgments, such that the truth of x and y jointly implies the truth of z and conversely, or, in other words, such that if operation of judgment x is performed and on its result operation y, the final result coincides with that of the judgment z. Symbolically, this is stated in the equivaluation

$$xy = z.$$

Similarly,

$$xy = vz$$

means that z follows from xy, but not, so far as known, conversely; xy is equivalent to the compound operation vz, operation v being at present undetermined. This may also, using the symbol $\bar{z}$ for the denial of z, be expressed as

$$xy\bar{z} = 0,$$

i.e., the assertion of xy and the denial of z are together equivalent to the assertion of falsity, which is the opposite extreme to certainty in the universe of judgment.

Moreover, the tertiary operation of identifying these identities of identities is performed whenever arguments

are equivaluated; and single symbols may be used to represent these tertiary operations, no less than the primary and secondary operations which they imply. Thus,

$$xy = z$$

might mean that if the inference x is applied to the result of the inference y, the result is the inference z.

We can, therefore, clearly distinguish three stages in the logic of quality. The first may be called the logic of simple apprehension, in which acts of apprehension that are logically (not psychologically) simple are equivaluated; the second is the logic of judgment, and deals with the equivaluation of judgments; while the third is the logic of inference, and deals with the equivaluation of inferences. Boole's treatment of probabilities is our one clear example of the employment of this second logic. Of the third we have, I think, no example, though the conception of it is latent in certain phases of ordinary thought. The relation of the second logic to the first, and of the third to the second, is such that the term-operations of the former are, in each case, the statements of the latter. The term of the second, when expressed in the language of the first, is of the form

$$xy = 0.$$

In other words, the secondary terms contain two dimensions of the primary terms; they are double units. Similarly, the tertiary terms assume in the language of the secondary the form

$$xyz = 0,$$

and contain, therefore, three dimensions of the secondary terms, or six dimensions of the primary terms.[1] Starting from the primary logic as fundamental, the other two may be conceived as developing from it in the form of functional logics of particular kinds, analogous in conception to that of functional algebras in mathematics.

Having sufficiently discussed the connexion that ought to exist between the symbolic language of general logic and those of the special logics which may be derived from it, let us now consider more particularly the exact relation between the languages of qualitative and quantitative logic. By a careful analysis of the laws according to which class-symbols combine, Boole showed that these laws are identical with those of mathematical symbols, the proviso being made that in class-logic it is always true that—

[1] The number of *different* terms is only three, but each occurs twice, thus making up the six.

$$a\,(1-a) = 0 \text{ or } a = a^2.$$

In other words, *symbolic class-logic, as symbolic, is identical with a mathematics in which all numbers are either zero or unity.* Hence, all mathematical truth becomes logical truth when this condition is superposed. Boole develops this principle in a very striking manner and at some length: and here, probably, is the main source of the erroneous impression that in his system logic is treated as a particular case of ordinary mathematics. In truth, however, *the limitation thus put on the meaning of the symbols amounts, not to a specialisation, but to a generalisation of the subject-matter to which they are applied.*

To see this more clearly, let us put the statement in another way. As said before, logic is mathematics with number thought out of it. In equational form, and symbolically,

$$\frac{Mathematics}{Number} = Logic.$$

Expand this in Boole's manner, and we have

$$Logic = \frac{Mathematics}{Number} = Mathematics + Class\text{-}logic + Other\ Logics.$$

The practical conclusion is Boole's conclusion, differently stated—namely, *whenever considerations of number arise, reject them, and the mathematical conclusion yielded by the symbols will be true in qualitative logic.* Take off such operations as 2, 3, &c., if they appear in the development of your symbols, whether they appear as coefficients or as indicative of repeated operation. Where number is nothing, repetition is nothing; the repetition of an operation is, in that case, the operation simply.

This is, in fact, the first law of thought, or rather, as it should be stated, of qualitative thought. The perception or conception a is, through all variety of combining procedure, identical with itself; in its pure *quality* it remains itself, unaffected by degree or repetition.

$$a = a + a = a + a + \ldots + a = na,$$

$$\text{and } a = aa = aaa \ldots a = a^n,$$

where n is, in both cases, a number indicating the repetition of a. The first equation declares that repetition in the synthesis of apprehension, the second that repetition in the synthesis of operation is of no account. Both alike illustrate the first *special* principle of qualitative logic, that number is irrelevant, and that therefore any number which chances to

occur must be treated as unity, since this is equivalent to ignoring it as number.

What, then, should be the meaning assigned in qualitative logic to the symbol of unity as standing by itself? The notion of treating every number that may emerge in a qualitative result as unity presupposes that $a.1$ may be written a, just as 2.1 may be written 2. Now, 2.1 may be written 2, or 2 as 2.1, because 1 is the symbol for the primary subject of operation in the synthesis of number. Numbers are built up with units thus symbolised; and, moreover, when number is applied to measure magnitudes, the unit is the absolute magnitude relatively to which every number has its meaning. When we are told that an object is 10 units long, the important point to know is whether that means 10 feet, or 10 inches, or 10 of what other unit. Following the suggestion of analogy, we see that in the expression $a.1$, 1 clearly should represent that on which a operates to produce the A-class; and a, being a selective operation, operates always on a whole, which it analyses into the two classes of the As and the not-As. The symbol 1, then, should stand for the absolute whole on which all such simple class-operations take effect, and which is therefore the logical class-unit. That absolute whole is the universe of class-discourse, which is, therefore, fitly symbolised as 1 in class-logic.

Boole comes to this conclusion on practical grounds, though afterwards he devotes much attention to its theoretical justification in his own way. The practical suggestion arises very simply. If the universe be symbolised as 1, and the selective operation not-a therefore (assuming the principle of excluded middle) as $1 - a$, the law of contradiction is, symbolically, an immediate consequence of the law of identity in its second and more important form: for if

$$a = a^2,$$

it follows that

$$a\,(1 - a) = 0.$$

If the operation a is performed on the universe, and its result disjoined from the universe, the class of not-a's is left: if then a operates on this remainder, the result is nothing. And here we find suggested a new way of symbolising not-a which has important uses, namely, as $\frac{0}{a}$. This $\frac{0}{a}$ is, in fact, the natural symbol for that which becomes zero when operated on by a, and thus implies the law of contradiction in its mere form. Using it, and choosing 1 as the symbol of

the universe, we can exhibit symbolically the logical connexion of the three laws of thought, thus :—

$$a + \frac{0}{a} = 1 \text{ (law of excluded middle).}$$

$$\therefore a^2 + a\frac{0}{a} = a.$$

$$\text{But } a\frac{0}{a} = 0 \text{ (law of contradiction).}$$

$$\therefore a^2 = a \text{ (law of identity).}$$

This last, which is the special law of class-logic formulated by Boole, we have already seen reason to regard as the natural *specialisation of general logic to the case of pure quality.* We now see that this specialisation naturally takes place by the operation of the symbols themselves if 1 is chosen as the symbol of the universe. Moreover, we have also seen that this choice should be made on *a priori* grounds.

The unit-symbol stands in mathematics, and, therefore, should for consistency's sake stand in all logics, for the ultimate subject-matter on which thought-operation begins. In mathematics, thought proceeds by a *synthesis of units*, in class-logic it proceeds by the *analysis of a universe.* And all logics might be classified by this test into those which start with a unit and are synthetic, and those which start with a universe and are analytic. The consistency of symbolic language then requires that the same symbol shall represent, in the first case a unit, in the second case a universe, in both cases unity, the original subject of operation.

If the argument of the foregoing pages be valid, the conclusion amounts to no less than this, that the human mind has already forged for itself that invaluable instrument of thought, a symbolic language applicable to all departments of abstract logic, as well as to that department for which it has done so much, and standing in need only of appropriate limitations and developments according to the logical nature of their different subject-matters. There can be little doubt that on the development of this language depends the construction, if it is ever to be constructed, of a complete formal science with the same relation to science generally that mathematics has to science in its quantitative aspect. Nor does there appear to be any particular reason why we should not have such a science, except the reason of its greater difficulty; and even a little progress made with it would be of no small value as a means towards the clearing up of fundamental conceptions, and the development of method in our ways of grasping truth.

III.—DR. MARTINEAU AND THE THEORY OF VOCATION.

By Rev. Hastings Rashdall.

Prof. Sidgwick's *Method of Ethics* may be said to represent the most remarkable attempt ever yet made to combine into a systematic and coherent system the opposite aspects of ethical truth of which Intuitionism on the one hand and Utilitarianism on the other are the one-sided expressions. In an examination of that work which appeared in No. 38 of Mind, I endeavoured to show that Prof. Sidgwick's own line of argument logically followed out would require us to place the point of junction (so to speak) between the mutually complementary doctrines considerably nearer to the "intuitional" pole than it is placed by Prof. Sidgwick himself. Accepting Prof. Sidgwick's rationalism, his "disinterested" psychology, his consequential criterion, and (I may add) his faintly adumbrated natural theology, I argued that the acceptance of these doctrines logically necessitates the rejection of the Hedonism with which they are associated in Prof. Sidgwick's actual system. To one occupying this position with reference to Prof. Sidgwick's utilitarianism, Dr. Martineau's *Types of Ethical Theory* will appear to afford a very noble expression of the complementary truths ignored by the former. When he confines himself to the question of ethical *method*, he will find himself almost entirely in agreement with Prof. Sidgwick and completely at issue with Dr. Martineau. When he approaches the more fundamental question of the ultimate ethical end, he finds himself in agreement with Dr. Martineau and at issue with Prof. Sidgwick. The ethical system for which I, and probably a very large number of the silent critics of these two great writers, look in vain among contemporary English moral philosophers is a system the body of which—the firm, strong, logical skeleton, and the flesh and blood of moral psychology—should be supplied by Prof. Sidgwick and the animating soul by Dr. Martineau.

The position which to the present writer Prof. Sidgwick seems to have placed beyond the reach of controversy is the principle that it is impossible to find any workable criterion of the morality of actions without taking into consideration the sum-total of their consequences or effects upon universal well-

being. Anyone who has gone thus far with Prof. Sidgwick will necessarily (with all due respect to a teacher so justly revered as Dr. Martineau) regard his attempt to introduce as the sole criterion of the morality of alternative courses of action an introspection into motives, as an anachronistic effort to galvanise into life the corpse of the old-fashioned, though in truth very modern, system of English Intuitionism. But the acceptance of the principle that actions are to be judged by their consequences in so far as these can be foreseen—or rather not without reference to those consequences—leaves it open to us to dispute Prof. Sidgwick's hedonistic interpretation of that ultimate good which it is the aim of moral action to promote. Because the good man must seek to promote the general good, it does not follow that the goodness which prompts does not possess a higher intrinsic value than the pleasure which results from his action, that moral goodness is not one, and that the most indispensable, element in the 'good' which he seeks to realise for others, or again that all pleasures are of the same moral value. In the paper to which I have alluded I have endeavoured to show that it is logically impossible to recognise the *obligation* of benevolence for myself without at the same time recognising the *value* of benevolence both for myself and for those whose good I am bound to promote. The εὐδαιμονία which the good man is to promote must include virtue as well as happiness. I do not propose at present to criticise Dr. Martineau's system as a whole; but I may be allowed, before coming to my proper subject, to point out the place which such a "Table of Springs of Action" as Dr. Martineau has drawn up would occupy in the system of non-hedonistic eudæmonism, which I should wish to see substituted for the hedonistic utilitarianism of Prof. Sidgwick. As an immediate criterion of conduct, Dr. Martineau's table of motives seems to me to be open to all the criticism to which it has been exposed in this Review by Prof. Sidgwick. Its proper place, from the ethical standpoint here advocated, would be in the analysis of the constituent elements of ultimate good, as a guide to the estimate of the relative values of different kinds of good—of the moral value of different desires or of the pleasures resulting from their gratification. A life in which the various springs of action or (as I should prefer to express it) the various *desires* should come into play in the order prescribed by Dr. Martineau—a happiness to which the gratification of these desires should contribute in something like the proportion represented by Dr. Martineau's scale—would be a very fair representation of the εὐδαιμονία

which I would substitute for the ordinary utilitarian 'greatest quantum of pleasure'.[1]

At present, however, my purpose is to criticise Dr. Martineau's view of the ethical criterion, not to estimate the value of his contributions to other parts of ethical doctrine. I have merely indicated the point of view from which I am in harmony with Dr. Martineau, in order that I may not be supposed to under-estimate the value of a work which constitutes the only serious attempt which has been made in recent times to give a philosophical form to the ever-shifting tenets of popular intuitionism. I propose in the following pages to examine Dr. Martineau's ethical criterion in its application to one particular duty—that of choosing, or rather determining, one's vocation. I adopt this method of criticism, partly because the subject is one strangely neglected by most modern ethical writers, but especially by those of the intuitional schools, and partly because it seems to me to afford a peculiarly good touch-stone to which to bring all theories of the nature of the moral criterion.

Dr. Martineau's ethical criterion is as follows: "*Every action is* RIGHT *which, in presence of a lower principle, follows a higher; every action is* WRONG *which, in presence of a higher principle, follows a lower*" (ii. 251). The moral order of precedence among the possible principles or 'springs' of action is elaborately determined by Dr. Martineau, while immediately after the table in which he sums up the results of this inquiry (ii. 247), there follows a section on the question, "*How far a Life must be chosen among these*". Dr. Martineau here distinctly faces the objection that it rests in great measure on our own action which motives shall be presented to the mind and which shall not. Unless the higher motive be actually present to the mind, be it remembered, the action motived by the lower "spring" cannot, according to Dr. Martineau, be wrong. "Ought we to content ourselves," he asks, "with treating the springs of action as *our data*, with which we have nothing to do but to wait till they are flung upon us by circumstance, and then to follow the best that turns up?" The objection could not be more aptly stated. Dr. Martineau meets it by maintaining as a deliberate thesis "that we are to accept our rival incentives at the hands of circumstance and consider that our duty begins with their arrival". At the same time he admits

[1] I do not of course commit myself to details; and indeed such an absolute preference of one desire to another seems to me impracticable. Moreover, the table seems to me to exclude many most powerful 'springs of action'.

that "if there be at the command of our will, not only the selection of the better side of an alternative, but also a predetermination of what kind the alternative shall be, the range of our duty will undoubtedly be extended to the creation of a higher plane of circumstances, in addition to the higher preference within it". But on what principle is a man to make his choice between the higher and the lower "plane of circumstance"? How is he to recognise the higher plane? From Dr. Martineau's fundamental principle it would seem to follow that a man is always bound to choose that "plane of circumstance" on which he will be likely to find the higher motives streaming into his consciousness in the greatest abundance and with the greatest force. Dr. Martineau himself raises the question: "If compassion be always of higher obligation than the *love of gain* or *family affection*, how can a man ever be justified in quitting his charities for his business or his home?" But to this question he has supplied no adequate answer. The only way in which Dr. Martineau strives to beat down the difficulty which he has himself so forcibly raised, is by the contention that "the limits . . . within which the higher moral altitudes can be secured by voluntary command of favouring circumstances are extremely narrow". This view he supports by insisting upon the undoubted fact that a man cannot entirely alter his nature by artificial change of environment, upon the moral advantage of the "clashing of the involuntary and the voluntary," upon the moral ill-effects of setting aside "relations human and divine" by the choice of an apparently higher walk of life. Now, in the first place, I remark that, in so far as a man deliberately turns a deaf ear to the solicitation of a higher motive from regard to the considerations insisted upon by Dr. Martineau, he is deserting the fundamental principle of Dr. Martineau's ethical system. In urging a man to repress his benevolent aspirations for fear of the moral effects (social and personal) of the neglect of family relations and the like, Dr. Martineau is distinctly transferring the object of moral discrimination from the motives to the consequences of the alternative courses of action. He is deserting the Highest-motive-criterion for the principle of Individualistic or of Universalistic Perfectionism. He bids the seeker after moral truth in certain particular cases act upon the lower in preference to the higher motive;[1] and yet no adequate rules are given for the dis-

[1] It might, indeed, be pleaded that the desire of doing right as such is higher than the benevolent desire; but Dr. Martineau does not admit the existence of the former.

crimination of these exceptional cases. If in one particular case a man is permitted to disobey Dr. Martineau's fundamental canon from fear of the moral ill-consequences which might subsequently ensue, how can he obey it in any case in which he foresees that the net moral results of acting on the higher motive will be less satisfactory than those which result from choosing the lower motive? The method of Ethics to which such a principle would lead would be a very different one from Dr. Martineau's method of introspection into motives.

But we must return to Dr. Martineau's contention "that the limits within which the higher moral altitudes can be secured by a voluntary command of favouring circumstances are extremely narrow". Here I venture very decidedly to join issue with Dr. Martineau. It is all very well to point to the moral failures of monastic systems, and the danger of neglecting natural "relations, human and divine". But what relations does Dr. Martineau mean? It may be true that a man cannot desert "his business or his home for his charities" without neglecting "relations human and divine," when once he has got a business or a home. But it rested with himself to create or not to create the business or the home in the first instance. And on what principles is he to decide whether to create them or not? Practically, Dr. Martineau's advice to anyone in doubt as to the choice of an employment or profession seems to be 'Don't choose one at all'. "Let him accept his lot," he tells us, "and work its resources with willing conscience; and he will emerge with no half-hearted and crippled character." This might be good advice to one born heir to an estate or a great business; it would be intelligible advice—though there are cases in which its morality would be questionable—to a son brought up by an arbitrary father for a particular profession. But to the man who is really free to choose between half-a-dozen different 'lots,' and in anxious doubt which of them to adopt, the precept 'Accept your lot' will seem but a mocking echo of the question that distracts him. If 'one's lot' means one's actual profession, the advice is meaningless to the boy or the man who has not entered upon any; if 'one's lot' means the lot to which one is called, the precise difficulty lies in knowing what that lot is. The maxim, 'Perform the duties of your vocation' is of no use to a man grappling with the tremendous problem—to many a man the most difficult practical problem which he ever has to face—that of finding out what his vocation is.

The duty of choosing a profession has been well called—

I think by Prof. Seeley—the most important of all duties, and the same writer very reasonably complains of the almost total neglect of this department of ethics by moralists. I may illustrate this neglect and the strange consequences to which it sometimes leads by a reference to another anti-utilitarian writer of a different school from Dr. Martineau's, Mr. F. H. Bradley. "My Station and its Duties" is the title of the only chapter of his vigorous *Ethical Studies* in which Mr. Bradley faces the question of the moral criterion. "My station and duties" is the formula by which he seeks to answer that question: and yet in the whole chapter there is not a word as to the principles upon which a man's station must be chosen except what is contained in the lines (p. 183)—

> "One place performs like any other place
> The proper service every place on earth
> Was framed to furnish man with".

It should be observed that this question of choosing a profession is precisely one to which the ordinary objections to the systematic treatment of questions of Casuistry does not apply at all. Against such a treatment it may plausibly be urged in ordinary cases that the decision, when the difficulty actually arises, has to be taken without prolonged and self-conscious deliberation; that to deliberate in the face of an apparent duty generally means to seek an excuse for evading it; that there is something morally unwholesome in the introspection and self-analysis, and still more in the anticipation of abnormal moral perplexities, or even in dwelling upon them when they arise; and, finally, that the details of morality as opposed to its general principles do not admit of scientific adjustment: *αἰσθητὰ γὰρ τὰ καθ' ἕκαστα*. But the choice of a profession is precisely a question which from the nature of the case *must* be deliberated on, and upon which, in numerous instances, conscientious men do deliberate long and anxiously. Here if anywhere it would appear reasonable to expect that a system of Moral Philosophy might have some guidance to offer to anxious seekers after Right. Even if the scientific discussion of such a subject were of little direct use to the doubting conscience of the individual[1] (as no doubt must generally be the case with theoretical determinations of practical questions), it might at least be expected to be of more value in determin-

[1] Since writing the above, a friend informs me that he was determined in the choice of his profession, the medical, by the incidental treatment of this subject in Prof. Green's *Prolegomena to Ethics*.

ing the advice which should be given to others upon a subject upon which more than on any other moral question men are wont to seek for counsel and advice. The Moral Philosopher as such is no more capable of answering such a question than anyone else; but he ought surely to be able to point out the considerations upon which its solution turns, and so to state the question in a manner in which it admits of an answer. I need hardly say that in the present essay I make no pretension to contribute to the discussion of the subject anything which would be likely to be of much value either to inquirer or adviser in such cases. I merely wish to point out that the question of choosing a profession is a peculiarly good test of any philosophical criterion of morality, and to show that Dr. Martineau's criterion is one which could not practically be applied to its determination, or at least that the results of its adoption would be such as would not commend themselves to the practical moral judgment of thoughtful and reasonable men.

It will be well perhaps, at this stage of my argument, to call attention to the psychological grounds upon which Dr. Martineau bases what I must respectfully call his evasion of this problem:

"The limits, however, within which the higher moral altitudes can be secured by voluntary command of favouring circumstances are extremely narrow. Go where we may, we carry the most considerable portion of our environment with us in our own constitution; from whose propensions, passions, affections, it is a vain attempt to fly. The attempt to wither them up and suppress them by contradiction has ever been disastrous: they can be counteracted and disarmed and taught obedience only by preoccupation of mind and heart in other directions. Nothing but the enthusiasm of a new affection can silence the clamours of one already there" (pp. 248-249).

Dr. Martineau's treatment of the whole subject seems to have been warped by the assumption that the only way in which a man can attempt to raise himself to 'the higher moral altitudes by the voluntary command of favouring circumstances' is by 'going out of the world' in the monastic sense. He insists with much force upon the folly of attempting to suppress the lower 'propensions, passions, and affections' by one tremendous sacrifice of the external goods or circumstances which seem most obviously to call them into activity. It is quite true that 'it is a vain attempt to fly' from one's natural 'propensions, passions, and affections,' by change of external environment; but it is entirely possible to give a wholly new direction to them by such a change. It is precisely because 'the affections can be counteracted

and disarmed and taught obedience only by preoccupation of mind and heart in other directions,' that the influence of environment upon character is of such decisive importance. It is just because 'nothing but the enthusiasm of a new affection can silence the clamours of one already there,' and because some occupations are so much more favourable than others to the growth of 'new affections' of the right kind, that a man's character is so largely determined for him—determined by himself, but determined in ordinary cases once for all—by the choice of his walk in life.

Without denying to every honourable and worthy calling either its characteristic virtues or its characteristic vices, it is surely undeniable that some professions are as a rule more favourable to virtue than others. It is not to the purpose to allege that all callings are compatible with the highest morality. Exceptional men may lead exceptional lives in any walk of life; the very obstacles to virtue which some careers present will become so many occasions for moral achievement to those who are capable of triumphing over them. But we are not dealing with exceptional men, but with ordinary men, though (since *ex hypothesi* they are desirous of regulating their choice on the highest principles) with ordinary good men. And the characters of ordinary men are enormously moulded by their environment—by the nature of their work and of the people with whom it will bring them into contact. To such men when hesitating as to the choice of a profession such alternatives as these are constantly presenting themselves. A man hesitates between the profession of a doctor and that of an infantry-officer, more or less clearly foreseeing that if he becomes an officer there lies before him (in time of peace) a life of idleness just disguised and sweetened by a moderate quantity of routine work, a life of comfort and pleasure, of almost unavoidable luxury and self-indulgence, to say nothing of the actual temptations naturally associated with such a life. Against this there is—so the matter may present itself to him—little to be set except the rare opportunities of heroism which may from time to time present themselves in war. As a doctor there lies before him a life of hard work and great usefulness—a life in which there will be daily and hourly calls for the exercise of sympathy, self-denial and devotion. Or again, take the case of a man hesitating between the life of a parish clergyman and that of a lawyer. Of course the temptations of the highest callings—the degradation of the man who cannot in some measure rise to the moral level which they demand—is great in proportion to the opportuni-

ties which they offer. But it will hardly be denied that most men who have adopted the profession of a parochial clergyman from not wholly unworthy motives—sometimes even that exception might be omitted—are made better by the demand which such work incessantly creates for sympathy, for self-judgment, for moral effort, for charity in the highest sense of the word. How constantly does one find the highest qualities developed by a few years of serious clerical work among the poor in a man who certainly showed no signs of their possession as an undergraduate?[1] Can it be doubted that in all reasonable probability those virtues would have remained, to say the least of it, equally dormant and unobtrusive had he become a barrister? It is not, however, necessary for my argument to show that the actual moral performance of one profession is on an average superior to that of another, though I should myself have little doubt of the fact. The question is, whether some professions do or do not make greater and more frequent demands than others upon the higher 'springs of action' and so create a 'higher plane of circumstance'. Here I should have thought there could not be room for the smallest doubt. Professions which bring a man into contact with human suffering must surely more frequently suggest benevolent impulses than those whose work is done in the study or the office, whatever be the response which is actually made to such higher suggestions. Professions which offer opportunities for work not wholly dictated by personal interest call for these higher motives more frequently than work in which there is no room for any honesty except the narrow honesty which is the best policy. Professions which necessarily involve an attitude of antagonism to moral evil must clearly be more likely to excite those sentiments of compassion and reverence which Dr. Martineau places at the head of his Table of Springs of Action than professions in which the existence of evil is either kept out of sight or has for the most part to be accepted as a datum instead of being grappled with. If that be so, I cannot see how, on Dr. Martineau's principle, a man to whom the profession which will secure the presence of these higher motives has once suggested itself, could ever be justified in adopting one which will place him on a lower 'plane of circumstance'. Whether he possesses the capacity or taste for the work, whether it is probable that he will

[1] The same might no doubt be said of other of the nobler professions. I select the illustration with which my own experience has made me familiar.

succeed in making as frequent response to these higher springs as he might make to the good but inferior springs of action suggested by work of a less morally exacting kind, whether he will be more useful to Society by adopting the calling which makes the greater demand upon the higher springs—all these are, as it seems to me, utilitarian considerations with which the Intuitionist of the 'highest motive' school cannot logically concern himself. Whether the moral value of the motives immediately prompting a man to choose the one calling or the other be considered, or whether we have recourse to Dr. Martineau's supplementary rule of choosing the 'higher plane of circumstance,' nothing could, as it seems to me, justify a man in choosing what we may for the sake of convenience call the lower profession in preference to the higher, but the fact that the desire of adopting the latter had never occurred to him, or that he had never had one moment's experience of those higher desires which would be gratified by the adoption of the higher profession.

It must be remembered that the collision of motives respectively impelling a man to the choice of two alternative walks of life is not commonly limited to the collision between one higher motive and one good but somewhat lower motive. Dr. Martineau, indeed, shows a disposition to deny the possibility of action impelled by a mixture of motives. But whatever be the case with actions actually performed, there can be no doubt that, so long as alternative courses are still in contemplation, it seldom happens that the man is impelled to the one or other course by one motive alone. This is eminently the case with the choice of a profession. Sometimes, indeed, some of the lowest inducements will persist in arraying themselves on the side of the highest of all. What more common in religious men than a coincidence between the 'love of power or ambition' (placed 7th on Dr. Martineau's list), or even 'love of gain,' and the promptings of 'compassion' or 'reverence'? So again in the familiar struggle between the intellectual and the philanthropic desires, the lowest desires of all will commonly take the side of the former. 'Love of ease and sensual pleasure' will ally themselves with 'love of culture' in deterring a man from those active professions to which he is prompted by 'generosity' and 'compassion' in the present, and in which those motives of action are likely to be most frequently called into activity in the future. It must be remembered that where a higher desire and the wish to provide for a future supply of such desires point one way, and the lower desires the

other, the higher desire is by no means always a predominant, habitual or overmastering desire. Where that is the case, it may be a man's duty to adopt it irrespectively of inclination. The thought of the higher vocation may, indeed, be a mere transient, intermittent aspiration. The man may shrink from the higher vocation (though willing to accept it if proved to be his vocation) with an aversion in which dislike of its hardships, felt incapacity for its duties, and the overmastering attraction of some lower though not unworthy passion or ambition will mingle almost inextricably. Yet, if it be once admitted that the moral value of the impelling motives must determine the choice, it must follow that no man attracted to the army by 'love of power or ambition,' could ever conscientiously devote himself to that profession if a 'love of culture' had once suggested to him the thought of being an artist; that no man who had ever felt sincere compassion for the sorrows of the poor and recognised the supreme nobleness of philanthropic work could ever devote himself conscientiously to the cause of science or learning; that no woman who had ever aspired after the usefulness of a hospital nurse or a schoolmistress could ever conscientiously consent to marry a squire or a man of business.

In fact, since the profession to which a man is most strongly attracted commonly presents itself to him in an agreeable light, *i.e.*, as likely to satisfy some of his lower desires as well as one or more of the higher ones, it would scarcely be an exaggeration to say that on Dr. Martineau's principles it will generally be a man's duty, when hesitating between two or more professions, to choose that which he dislikes most.[1] Such a preposterous conclusion would, of course, be rejected by Dr. Martineau as emphatically as it would by any other sensible man. Yet from the perplexities and paradoxes which we have been considering there seems to be no way of escape so long as we confine ourselves to a

[1] It is difficult to bring within Dr. Martineau's Table some of the motives which frequently have most weight in disposing a man to one or other profession. Perhaps the strongest likings or dislikings for particular callings commonly rest upon a love of society or of society of a particular kind, or upon dislike of a particular kind of society. (By society I mean all kinds of intercourse with one's fellow-men.) It is hard to explain such likings or dislikings by any of Dr. Martineau's 'springs,' whether taken singly or in combination. The only love of pleasure which he recognises is 'love of *sensual* pleasure'. I quite assent to the theory of the disinterestedness of most of our desires. The pleasure would not be felt but for a previous desire, but when the gratification of the desire is found to be pleasant, a desire of the resulting pleasure (though not sensual) must surely arise.

purely subjective criterion and refuse to consider the consequences of our action upon social wellbeing.

It is true, indeed, that Dr. Martineau might point to not a few passages of his book where the calculation of consequences is admitted to have a place in morals: but the relation of the 'Canon of Consequences' to the Canon of Motives is nowhere adequately explained. In one place, indeed (ii. 255), it is admitted that such a "computation is already more or less involved in the preference of this or that spring of action; for in proportion as the springs of action are self-conscious, they contemplate their own effects, and judgment upon them is included in our judgment of the disposition". If this admission be pressed, it seems to me to amount to the practical adoption of a Utilitarian (*i.e.*, consequential) criterion of the morality of at least all deliberate actions, in the only sense in which I am contending for its adoption. All action must affect some one, and if a man is reflecting upon the course of conduct which it is right for him to pursue, it must surely occur to him that the consequences of one course of action will be more socially beneficial than those of another. How, then, can he fail to be moved to the adoption of that alternative by 'compassion': and compassion, in Dr. Martineau's table, takes precedence of all other springs of action, except 'reverence'. Except, therefore, in so far as its dictates may be modified by those of reverence, compassion seems to be practically erected into the ethical criterion. This, however, is not explicitly admitted by Dr. Martineau, and I must continue to assume that comparison of motives is meant to be his working criterion.

It may be urged that, however unsatisfactory Dr. Martineau's criterion for the determination of cases of conscience such as these, no more satisfactory guidance is to be obtained from any other. If we adopt tendency to promote social good (however understood) as our test, is not the difficulty (it may be asked) quite as great? If a man's duty is to adopt the course of conduct which produces the greatest amount of good on the whole, how is it possible to set limits to the self-denial, the asceticism, which such a principle of conduct seems to demand? How is it possible, except by a cynical or pessimistic disbelief in the usefulness of philanthropic effort, to justify the adoption of a less useful in preference to an intrinsically more useful or laborious profession —the expenditure of time upon abstract thought or study which might be spent in teaching the ignorant and brightening the lives of the wretched, the expenditure of money upon the conventional comforts of a middle-class home (to

say nothing of the luxuries of 'the rich') when it might be spent upon hospitals and young men's clubs?

I do not pretend to offer a complete solution of this most difficult problem of practical morality. I only wish to point out that, on the theory which makes universal εὐδαιμονία the supreme end, it is not incapable of a solution which may commend itself to 'common sense' without in any way repressing the highest moral aspirations. I propose to notice a few of the more prominent of the considerations which must be taken into account in a solution of this question, whether in its application to the choice of a career or the choice of a mode of life in so far as it remains open to those who have already adopted some recognised profession. However obvious they may seem (as most of them certainly are), an attempt to enumerate them will be the best way of illustrating the practical adaptability to such cases of what I may call Non-hedonistic Utilitarianism or Eudæmonism.

(1) In the first place, there are those considerations of what I have called 'moral prudence,' on which Dr. Martineau has—as I venture to think quite inconsistently with his main principle—sufficiently insisted. Before embarking under the influence of some higher motive upon a course of action not required by strict duty, which will require for its maintenance the continued presence of such higher motives, a man should have a reasonable prospect that the necessary inspiration will hereafter be forthcoming. Otherwise, the adoption of the higher course of life will lead to a moral fall rather than to a moral advance. In such cases the surrender to the 'higher motive' will not be conducive to the man's own moral wellbeing on the whole, and therefore not conducive to the good of society. Of course this principle will not hold where the course of action to which man is called is one of plain duty. But if the true canon of duty be, 'Act always on the highest motive,' it is difficult to see how any aspiration after some more heroic or more saintly walk could ever be rightly repressed from a fear of its possible moral consequences. In that case the answer to such fears would be 'Better do right now, even if you will not be able to live up to the level of your present enthusiasm hereafter'. If, on the other hand, it be the duty of the individual to realise the highest attainable moral good for himself and others, he will recognise that, though the career of a philanthropist is higher than that (say) of an honest lawyer, he will himself attain a higher moral level as a lawyer than by the more imperfect fulfilment of a higher ideal.

(2) These considerations naturally lead us to the observation that certain social functions require for their adequate

fulfilment that they should be done in a certain spirit. Such functions demand the possession of certain qualities of mind or heart or character which cannot be summoned up at the command of the will, and cannot be satisfactorily performed merely as a matter of duty. Common sense as well as Catholic Moral Theology are therefore right in recognising that it would be positively wrong for anyone to enter upon certain careers which make great demands upon the moral nature merely from a strong sense of duty, when they have no 'internal vocation' for it. The principle no doubt requires to be extended to many careers beyond those afforded by the priesthood and the religious orders: and the true ultimate ground of such a distinction must, from our point of view, be found in the social advantages (moral and hedonistic) which flow from its observance and the social disadvantages which would be entailed by its neglect. The average sister of mercy is no doubt a more valuable member of society than a Belgravian lady who is somewhat above the average: but a sister of mercy with no natural love or instinct for her work, with no natural love for the poor or the sick or the young to whom she ministered, would be far less useful to society than the Belgravian lady who performs respectably the recognised duties of her station, even though she may devote what must in the abstract be considered a very excessive amount of time to domestic trivialities and social dissipation.

(3) While the principle just laid down applies pre-eminently to certain special callings, such as those of the artist, the scholar, the man of letters, the teacher, the clergyman, it applies in a certain measure to all work which is capable of being liked at all, or for which any special aptitude is possible. It is for the general good that every man should do the work for which he is most fitted; and, as a general rule, a natural liking for the work or kind of life adopted is one of the most important qualifications for it. There are of course obvious limitations to the principle thus laid down. The highest tasks are necessarily repulsive to the lower part of a man's nature. A due distinction must be drawn between the kind of dislike which there is a reasonable prospect of overcoming and the dislike which is insurmountable, and again between the dislike which interferes with the due performance of the work and the dislike which does not interfere with it. A surgeon who could not overcome a physical squeamishness at the sight of blood would be more useful to society as a billiard-marker. On the other hand absolute callousness to human suffering, though it might increase his

love of his profession, would be anything but a qualification for its duties.

(4) Regard must be paid not only to the effects of the individual's conduct, but to the effect of the general adoption of a like course of conduct on the part of others. Thus it would not be socially desirable to encourage all high-minded men to forsake the careers which seem from some points of view to stand upon the lowest moral level. A life of money-making (abstracted from the use which is to be made of the money when accumulated) may from some points of view seem one to which nobody could lawfully devote himself who had ever felt an aspiration after some higher kind of work: for, however necessary to society may be the work of merchants and stockbrokers, there would always (under existing conditions) be forthcoming a sufficient supply of duly qualified persons who would be attracted into these professions from purely mercenary motives. Against this, however, must be set the demoralisation which would result to such classes or professions, and the consequent injury to society, if all men of high character were led to avoid them. It may be questioned whether, upon this principle, it may not sometimes be a positive duty on the part of good people to continue in professions which may be in various degrees unfavourable to the improvement of their own personal character, or which at least involve much that is disagreeable to what we may call their moral taste—such as the professions of the brewer, the publican, the actress. The most extreme ill effects of the adoption of a contrary principle were experienced in the middle ages. The 'religious' life being assumed to be the highest of all careers, every man or woman anxious about his or her soul was driven into a religious house, unless indeed they were wealthy enough to found one. The consequence was an appalling relaxation of the standard of ordinary 'secular' morality—a complete de-spiritualisation of all 'secular' life, including that of the secular priest. Even the work of the pastor had to be abandoned to worldly men, because it was not disagreeable enough to satisfy the religious man's hankering after self-sacrifice.

(5) Similar considerations are applicable to the innumerable difficulties which beset the conscience of every man possessed with something of the 'enthusiasm of humanity' in the matter of personal expenditure, conventional luxury, and so on. In the first place he will apply the principle of 'moral prudence' to the effects of his conduct upon himself and his capacity for work. He will make recreation subordinate to work, social pleasures to social usefulness, and

so on. There is, however, room for as many different vocations, so to speak, in respect of the use that may be made of leisure-hours, as there is in the choice of a life-work: and some of them are higher than others. It is no doubt morally higher to spend one's evenings in teaching a night-school than to spend them in amusement or interesting reading. But if a man to whom some higher motive suggests the idea of taking up with the former occupation, feels that the work would be excessively distasteful, and that as a consequence he would be less capable of efficiently discharging his duties in the day, and probably become irritable, discontented and dyspeptic,—he will do much better to play whist of an evening instead, even in the interests of his own moral wellbeing. Still more evidently will such a course be recommended when we extend our view first to the direct effects of the two alternatives on the happiness of others, and then to the effects which would follow an extensive imitation of a conscientious but uncheerful philanthropy. On Dr. Martineau's principle, it is difficult to see how it is possible to justify a rich man under any circumstances living the life of a rich man, when once it has been suggested to him that he might spend his fortune on some great work of social usefulness. He would certainly be prompted to such a course by 'compassion' and deterred from it (among however many other motives) by 'love of ease and sensual pleasure'. On the other hand, when once the appeal is made to social wellbeing, a number of other important considerations suggest themselves which may well justify a man who does not feel strongly moved to make such a sacrifice in accepting the more agreeable alternative. He will reflect that the habits of a class cannot be suddenly changed, but that they may be gradually modified. He might therefore do more good by setting an example of liberality, care for dependents, devotion to public duties, and moderation in amusement and personal expenditure, than by absolutely stripping himself of his fortune. He will reflect that some forms of luxury have good social effects—such as the encouragement of art and superior workmanship, which ultimately benefits the community at large. He may feel that it is better to indulge to some extent in forms of luxury demanded by the customs of his class, but rightly condemned by the moralist, such as good dinners, expensive wines,[1] costly flowers, rather than abandon great opportunities of social or political influence and usefulness.

[1] I will not attempt to define the extent to which this principle should be carried: but to avoid misunderstanding, I may say that it seems to me that it is only on this principle that such dinner parties as are pro-

(6) Moreover, if *εὐδαιμονία* be the supreme end, my *εὐδαιμονία* is a part of that end: and my happiness is a part of my *εὐδαιμονία*, though not the whole of it. It ought not, therefore, to be sacrificed to promote a less amount of it in others. And up to a certain point the general *εὐδαιμονία* is best promoted by the principle that within the limitations demanded by strict duty everyone shall exercise a reasonable care for his own happiness, and shall not make such complete sacrifices of *ἡ ἐκτὸς χορηγία* as will (he being what he is) involve the destruction of his tranquillity and contentment, however much such sacrifices might be compatible with happiness in better men. This principle may be admitted even for the guidance of the individual conscience —and still more when there is a question of inculcating such sacrifices on people in general—without going the length of saying with Sir James Stephen, that "human nature is so constituted that nearly all our conduct, immensely the greater part of it, is and ought to be regulated much more by a regard to ourselves and to our own interests than by a regard to other people and their interests".[1] It is obvious that the extent to which this principle can be admitted will be very considerably narrowed by the acceptance of a non-hedonistic interpretation of *εὐδαιμονία*. As soon as morality is recognised as an end in itself and an essential part of *εὐδαιμονία*, it becomes impossible to admit that a pursuit of our own happiness unmixed with and unregulated by a desire for other people's could ever be the vocation of any man, even if in his particular case such a course of conduct should chance to be coincident with that dictated by the public wellbeing. The individual should pursue his own wellbeing as part of the general wellbeing, but he will recognise that his moral wellbeing demands a measure of self-sacrifice.

(7) And lastly, there is the fact that some kinds of work which do not call into activity the very highest 'springs of action' are as useful as, perhaps more useful than, those that do: and that in reference to some of these kinds of work it is even truer than of more distinctly spiritual kinds of work that 'the harvest truly is great but the labourers are few'. In England at least this is notably the case with all the higher kinds of intellectual labour. I for one cannot assent to that beatification of intellectual pursuits—and even of the most selfish forms of intellectual sybaritism—which is common among persons of literary and speculative tastes,

bably given by the simplest-living bishop upon the bench could be justified.

[1] In the *Nineteenth Century*, No. 118, p. 783.

but a demonstration of the supreme social value of such work—when it really is *work*—will be superfluous in the eyes of my present readers.

It is obvious that these reflections might be spun out indefinitely. Enough, it is hoped, has been said to illustrate the kind of guidance which may be afforded in the solution of such problems of vocation by the adoption of a consequential but non-hedonistic criterion of Morality.

It will by this time have become evident that the course of our argument has led us from the discussion of a particular duty—that of choosing a profession—into the discussion of a much larger and more fundamental question of ethics—the distinction between Duty and Good—between 'devoirs strictes' and 'devoirs larges'—the question whether there are or are not such things as works of supererogation. It has been throughout contended that there are cases where it is good for a man to contribute in certain ways to the general good, though it would not be wrong for him to refuse to contribute to them—that there are cases where a man may rightfully decline to perform socially beneficial actions for the reason (among others) that he does not feel a natural inclination or strong desire to perform them. On the other hand it has been assumed (as it must be assumed by every system which recognises moral obligation at all) that in some cases no amount of disinclination, no consideration of the sacrifice involved, will justify a refusal to adopt the course of action which will make the largest contribution to social good. But how, it may be asked, can such a distinction be admitted without involving ourselves in the *primâ facie* immoral corollary that a man can do more than his duty? I believe that we have already by implication arrived at something like an answer to the question. One course and one only can ever be a man's duty; but duty itself requires *in certain cases* that some regard shall be paid to the inner dispositions and inclinations of the individual. It is always a man's duty to do what conduces most to the general good; but the general good itself demands that whereas some contributions to social good shall be required of all men placed under the same external circumstances, in other cases contributions differing both in kind and in amount shall be demanded of different men. It will be well, however, to dwell a little more at length upon the difficulty and importance of the problem under discussion.

The case for and against works of supererogation shall be stated by two living French philosophers, M. Émile Beaussire and M. Janet. The contrast between their views

on this point is the more striking on account of their general philosophical agreement. In the admirable work of M. Beaussire, *Les Principes de la Morale*, which I had the honour of reviewing in MIND xi. 273, we find such utterances as these:

"Le mérite et la vertu naissent du devoir accompli; mais à leurs degrés superieurs, ils tendent à dépasser le devoir, ils s'élèvent jusqu'au dévouement" (p. 169). "Donner ses enfants à la patrie, quand elle les réclame au nom de la loi, est un devoir de droit. Les offrir, quand la loi permet de les conserver, est un devoir de vertu ou plutôt un acte de dévouement qui dépasse le devoir. Les soustraire à l'obligation légale d'une éducation publique où l'on voit un danger pour leur foi ou pour leur moralité, ce peut être le plus impérieux de devoirs" (p. 241).

On the other hand, M. Janet, the greatest living representative of French 'spiritualistic' philosophy, argues as follows:

"La distinction de deux domaines, le domaine du bien et le domaine du devoir, conduirait à cette supposition inadmissible, c'est qu'entre deux actions à faire, dont l'une serait manifestement meilleure que l'autre, il serait permis à l'individu de choisir la moins bonne. Où pourrait-il prendre ce privilège? N'est ce pas sous une autre forme cette opinion des casuistes si sévèrement condamnée par Pascal et par Bossuet, à savoir qu'entre deux opinions probables il est permis de choisir *la moins probable?*" (*La Morale*, p. 227.)

M. Janet then proceeds to explain the apparent collision between the verdict of reflection and the verdict of what Prof. Sidgwick would call 'common sense' on this head by the following considerations:—

(*a*) The degree of self-sacrifice demanded for the performance of a man's duty depends upon his circumstances, especially upon his "rôle" in society. When it is demanded either by that "rôle" or by the exceptional circumstances under which any man may find himself placed, "dévouement" becomes in the strictest sense a duty. [This is the principle on which I have myself insisted. What I desiderate in M. Janet's admirable treatment of this subject is some discussion of the principles by which a man is to determine his "rôle" in society. Every theory of duty requires a theory of vocation as its necessary complement.]

(*b*) The highest degrees of moral perfection are not attainable by all men. It is a duty to strive after the highest degree of moral perfection that circumstances permit. "Nul n'est tenu de faire ce qui n'est pas possible; mais tous sont tenus de faire ce qui est possible."

(*c*) The popular distinction between duties and acts which it is good to do but not wrong to omit depends mainly upon a particular characteristic of the subject-matter or content of certain duties, *i.e.*, their indeterminateness.

(*d*) The development of the moral consciousness in different men being unequal, the same actions do not always suggest themselves to all men; acts of extraordinary heroism,

ideals of extraordinary self-devotion, present themselves only to rare and exceptionally endowed natures.

"Or, tant que l'idée d'une action à faire ne s'est pas présentée à notre esprit, il est évident qu'elle ne peut être pour nous obligatoire : il n'en est pas de même aussitôt que cette idée a été conçue par notre conscience. Cette action, une fois représentée dans l'esprit, se présente à nous avec tous les caractères du devoir ; et nous ne pouvons plus l'écarter sans remords" (*ib.*, p. 232).

Thus the popular distinction between duties and acts which it is good to do is to a certain extent justified, while the immoral deduction that it is possible to do more than one's duty, and sometimes right to do less, is avoided. With M. Janet's position I should in the main agree. At the same time, I do not think that M. Janet has quite got to the bottom of the difficulty. I agree with him in holding that it is a duty to aim at doing the utmost amount of good that lies in one's power : and therefore it is not possible for a man to do more than his duty. Moreover, it is an essential characteristic of the Moral Law that it should be (in the Kantian phrase) 'fit to serve for law universal,' *i.e.*, that what is right for one must be right for everyone else under the same circumstances. But it is perfectly consistent with this principle to include a man's character, moral, emotional and intellectual, among the 'circumstances' upon which his duty in the particular case depends. The neglect of this distinction between external and what I may venture to call 'internal' circumstances has been the main source of the vagueness and uncertainty which has generally characterised the treatment of the distinction between duty and good actions. By M. Janet the principle of internal circumstances is to a certain extent recognised ; but the interpretation which M. Janet (here approximating to the position of Dr. Martineau) would give to the principle seems to me at once too wide and too narrow. The only internal circumstance, according to M. Janet, which could ever justify a man in omitting a good action which it would have been good for another to perform, seems to be the circumstance that the good action did not happen to occur to him. Similarly, according to Dr. Martineau, an act done from the highest motive actually present to the agent is always right ; an act is never wrong unless a higher motive than that which prompted his actual choice was present to the agent's consciousness. Now, it seems to me that the practical maxims of such a system would under certain circumstances fall very much below, at other times rise too far above, the requirements of duty properly understood. A crowd stands by while a child is drowned in three feet of artificial water in a London park.

Would it mitigate the moral disapprobation with which we regard *the act* of one of the individuals concerned if he pleaded that it never occurred to him to jump in and save the child? It seems to me that it is quite conceivable that to many persons in that crowd the thought did not occur. But it surely shocks all common sense to say that in that case they did not fail in their duty. There are surely many cases in which a man is ignorant of his duty, but in which we cannot deny that such and such a course was his duty, whether he knew it or not. From Dr. Martineau's point of view, indeed, such a statement would be an absurdity: since his criterion of duty is wholly subjective, it is impossible for a man to be ignorant of his duty. There is, according to Dr. Martineau, no objective right or wrong in actions; only a higher and a lower. But M. Janet insists strongly on the necessity of an objective criterion of morality. It would seem, therefore, that we must exclude, from the internal circumstances that may vary the duty of two men placed in similar external circumstances, the want of knowledge of what the duty is as well as the want of will to perform it, however much the former may mitigate the culpability. In asking under what subjective conditions A may be right in omitting an act which it would have been right for B in like external circumstances to perform, we must exclude the absence of sufficient devotion to duty on the part of A, or sufficient care to find out what his duty is: *ex hypothesi* A is anxious to find out his duty and willing to do it when found. But we may include in the internal circumstances that vary duty the presence or absence of all moral qualities which are not under the immediate control of the will — which may be more or less cultivated, but which are not producible to order. Now, there are some good actions which do and there are others which do not require for their fulfilment moral qualities of this kind. A man's duty under all circumstances is to do what is most conducive to the general good: but, while the general good demands that certain good things shall be done by all men irrespective of their natural disposition and the degree of moral perfection which they have attained, there are other good things which the general good only demands that persons of a certain disposition and moral character should perform. Thus the social value of truth-speaking is not dependent upon the strength of the agent's natural love of truth or the degree of moral advancement which he has attained in other respects. However reluctantly he speak the truth, society gets the same advantage; if he lies, the injury to society is the same. The public wellbeing demands that *all* shall speak the truth.

A man cannot therefore plead that he has no vocation for contributing to social good in that particular way: the general good demands that to this rule of conduct there shall be no exceptions. Indeed, the more exceptional be the lie, the more harm it is likely to do. On the other hand it is good for a rich man (with no obvious claims upon his purse) to sell all that he has and to give the whole of his time and money (in ways consistent with sound economical principles) to the service of the poor. But this only becomes a *duty* in persons endowed with a sufficient love of the poor to do this not grudgingly or of necessity. In that sense it might even be called a work of supererogation, though the term is on the whole an objectionable one: not only is it not an action demanded by social wellbeing of all men placed in similar circumstances, but it is one of those cases in which (as M. Janet says of the voluntary adoption of celibacy from the highest motives) "il est même evident que cet état ne peut être choisi par quelques-uns qu'à la condition de ne pas l'être par tous" (p. 229). The good of society demands that there should be different vocations, some of them morally higher than others. A man can never do more than his duty, or without sin do less when he knows what his duty is. But it is sometimes right, because desirable in the highest interests of society, that a man should choose the lower vocation. It is morally as well as socially desirable that there should be a great liberty of choice as to the particular way and as to the extent to which he will contribute to social good; but that liberty of choice is conditioned by the duty —and that the most imperative of all duties—of adopting the vocation to which upon a fair review of all circumstances, internal and external, a man believes himself to be called. It is conditioned also, I may add—and this is a consideration which would demand much fuller treatment were I writing primarily with a practical object—by the duty of moral progress; that is to say, of gradually fitting himself (so far as the external conditions of his life allow) for a higher degree of devotion to social good than any to which, being what he is, he could at present wisely aspire.

The general tendency of non-utilitarian philosophy has been either to assume that there is in all cases some one course of action which all moral men placed under the same external circumstances would recognise as their 'bounden duty,' or to find *in rerum natura* a fundamental distinction between 'duties' and acts which it is good to perform if one likes—between the terms 'right' and 'good' in their application to actions. On the other hand, it has been the tendency of utilitarian philosophy to reduce all duties to a general

obligation or encouragement of a philanthropy, the extent and limitations of which are usually left undefined. I have attempted in this essay to justify, by means of the principle of Vocation, the popular distinction between duties and charitable actions, without detracting either from the imperativeness of duty, or from the claims of a more abounding charity, and to find the basis of that distinction in the principle of Utility itself. Once more, for fear of misunderstanding, let me repeat that by Utility I do not mean Hedonism.

The positions at which I have arrived in the foregoing pages may be summarised by the following definitions :—

(1) It is always a man's *duty* to adopt the course of action most conducive to the general *εὐδαιμονία*. A man can never do more than his duty, nor can he ever (when he knows his duty) without sin do less.

(2) The name of *absolute duties* may be given to those rules of conduct which the general wellbeing requires to be observed by all men under given external circumstances,[1] irrespective of the subjective conditions of the agent.

(3) Acts or omissions which the general good only requires to be performed under certain *internal* circumstances or subjective conditions may be termed *Duties of Vocation*.

I have throughout discussed the subject without direct reference to those theological and religious considerations which originally underlay the employment of the word 'vocation' to denote a man's work or position in life. It might be difficult to continue the discussion without introducing theological postulates were I to undertake to discriminate with any subtlety between those higher aspirations which do and those which do not constitute a genuine call to a particular profession or a particular form of self-sacrifice. But up to the point which has now been reached I do not conceive that the solution of the question turns upon our attitude towards theology except in so far as our ethical position as a whole is necessarily modified thereby. Duty must (I believe) logically be something more to the Christian or the Theist than it can possibly be (however great their personal devotion to duty) in the theoretical outlook of the Agnostic or the Pantheist. That inward impulse which, in conjunction with objective circumstances and a certain subjective capacity, constitutes it for some men a duty to undertake tasks or sacrifices which are not duties to all, will necessarily be invested with a clearer and more commanding authority when it is interpreted as a veritable call of God.

[1] Including of course the duties of his profession or position when once it has been adopted and so long as it is retained.

IV.—THE UNITY OF CONSCIOUSNESS.

By Alexander F. Shand.

The analysis of Knowledge, which I attempt in this article, is opposed to certain commonly received principles of modern philosophy. That the Unity of Consciousness is the presupposition of all Knowledge and Reality, or at least of all Phenomenal Reality, is one of the most accepted of these principles. Associated with the name of Kant, and brought into prominence by him, it has been maintained in one form or another by his disciples. Now it is true that unless I have some idea of a thing, and so *unite* it to my conscious self, I can make no kind of assertion about it; and as to things also, unless I represent them in *one* consciousness, I can make no statement of their mutual relations. But what I can unite in one consciousness is limited, and when I try to embrace too much I am forced to let go what is in excess. What thus passes out of me becomes dead to me, nor can I think about it again till the idea of it recurs. Then, in company with the reappearance, rises naturally the judgment of Memory, that what I now experience I once experienced before. The import of the last phrase is to be noted. The reappearance I *am* conscious of, whether it be only the image of the past object, or that object itself; but that past order in which I *was* conscious of it I can never again say I *am* conscious of: it has passed for ever out of the unity of my consciousness—that is, the peculiar judgment of memory involves a wider object, an order of events which is not within consciousness, but without. Can we escape this conclusion? Can I suppose that this past order is nothing but the thoughts which the words suggest in me, which presuppose relation to a subject? There are two insuperable reasons why I cannot. In the first place, I have no such all-sufficient test of the truth of memory. I cannot find anywhere within consciousness the object of remembrance, and so decide in this simple way whether it is really what it asserts itself. In the second place, such an object I *am* conscious of, but an universal element of Memory is the past order which I *am not* conscious of, which in distinction I say I *was* conscious of; and it is not the remembrance which I was conscious of, but its object.

In memory, then, we have an instance of thought as it

were stretching beyond itself, forming judgments about objects without it, which, however far it reaches and whatever its activity, can never be brought into unity with itself. It is when put in this metaphorical way—and thought has a natural tendency to lapse into metaphor—that Dualism is apt to suggest those difficulties and puzzles which we are presently to consider. On the other hand, we must note that thought cannot make these affirmations about objects without it, unless the representation of these objects is already within it.

Not only do we need these objects in all judgments of the past and memory, but in all judgments of the Future. The anticipation of a possible future object is not that object; it certainly is and is certain, while the other is uncertain and is not. Whenever judgment does not concern itself with contents embraced in one consciousness and only these, a transcendent object is a condition of their possibility. Even in Desire and Will, which are more than our judgments about them, the case is the same. There are three points to notice concerning them. They must have an object or end. This object or end must transcend consciousness. A representation of this object or end must be in consciousness. The latter they *have*, and do not strain after; but they strain after the object of it, which they *have not*. This object is peculiar. In one sense it may have reality beyond consciousness, but in the sense in which desire and will strain after it it has no actual reality; only in the future it may have reality. Then when it is accomplished and no longer the object of desire or will, but not while it is, it may be a reality for consciousness and conditioned by it. In vain we seek to avert this conclusion by falling back on the thought of a possibility being realised as the only object of desire and will; by reiterating that whatever distinction consciousness sets up it must also transcend and bring back into unity with itself: but this object will always escape it. The image of what I want rises before me, taking real shape, but it is not this image which satisfies my want, nor is it the thought of this image becoming realised, but it is the realisation itself, which each fresh endeavour to bring within consciousness only shows me to be inevitably without.

Another fundamental kind of Knowledge which discloses the same necessary characteristic is Probability, which, however practically certain, contains for thought the possible truth of its contrary. The judgment asserts in the abstract that between A and B there is some relation I judge possible or probable. In alternating between belief and doubt, I

at one time represent this relation as actually existent, at another non-existent. If I look closely at what this image or thought contains, I find a subjective actuality, no possibility, which, after remaining a longer or shorter time what it is according to the firmness of my belief, actually becomes something else, there resting, or returning to its first state, or taking upon itself others, as alternatives suggest themselves to the doubting mind. This is the characteristic of all consciousness which is actually what it is, or actually becoming something else, possibly nothing. It is because the relation doubted about is beyond the unity of consciousness that possibility or probability belongs to it; for the possible arises when the subject is concerned with an object not at unity with itself and which it cannot determine actually by any necessary and universal rule. When we are doubting whether A is B, or not B, we still affirm that A is actually one or the other, thus implying that possibility no more obtains in the world without than in the world within in themselves, but only when the subject is separated from an object which it is concerned about, and which it cannot necessarily, but only possibly, determine.

In considering the object of the Possible Judgment, I have meant by its 'object' that which the judgment is concerned about. Now, this special object is abstract, and forms part of a more concrete object, the rest of which is determined, not possibly, but necessarily. If a part of this remainder is within consciousness, it may be only necessary here and now, or actual. This is the part which, being without consciousness, is possible. But the rest, whether it is within or without, has a necessity which can be deduced from an universal and eternal rule. Now, the special object of this universal rule or universal judgment is not merely this remaining portion, but the same eternal element of all objects. This special and abstract object of the Universal Judgment must be without consciousness. For the manifold which the individual subject can unite is finite, but the object of this judgment infinite. However I strive to sum up this—what Hegel calls false infinitude—and embrace more and more of it within consciousness, more remains without. This is why Kant and others considered that universality could not be proved inductively by experience, but only *a priori*. For no single experience, and no combination of experiences, can complete it.

It is an obvious deduction that Space and Time, so far as infinite, cannot be contained within the finite consciousness. But they are such important realities, so peculiar, and in-

volve so many difficulties, that I may be allowed to consider them separately on another occasion, independently and not deductively.

We will now sum up the results at which we thus have arrived.

1. Knowledge presupposes an object out of, and not in relation to, the finite consciousness.

2. This Dualism—this divorce between subject and object—does not confine the subject to the knowledge of its finite states, and set over against it an unknowable thing-in-itself. On the contrary, the Subject knows this Object, and though not completely, yet in part with necessary certainty, in remainder with probability or possibility.

3. Though Consciousness and Experience are necessarily finite, Knowledge is possibly infinite.

So far I have considered the finite consciousness; and as there is no necessity of thought, but quite the contrary, to refer all objects, and all relations of objects, to it as the ultimate ground of their possibility, no more is there when we substitute for it the Infinite Consciousness. I deny that knowledge involves this reference as a necessary factor—that the principles of unity and relation in the world are the result of the synthetic activity of the subject. We may agree that these forms of relation are necessary to the world and to all objects, and yet contend that they do not imply this subjective reference; therefore I avoid calling them thoughts or conceptions, as these terms at once dispose us to accept it. Now this doctrine asserts that not merely all consciousness, but all reality which has any meaning for us, is based upon thought, and would not be real without. Those who hold it look upon this distinction as made, and therefore transcended, by thought. In reality they discern nothing but the thought of it, and in the thought of it all the elements which can enter into knowledge, and all the objects which it is concerned about. It is otherwise with those who cannot accept this monistic doctrine. They will find that any common piece of knowledge contains judgments which affirm as the condition of their possibility objects which are not in consciousness, or due to it; furthermore, that these judgments are quite silent as to any further reference of these objects to an infinite consciousness. They will see no necessity why the world, withdrawn from the organising presence of thought, should relapse into a chaos of fleeting and unrelated sensations, as it has an organisation apart from thought, or at least not of necessity involving it. But this point I can only justify later on, when

I come to consider Space and Time. What truth, then, has this widely-accepted doctrine? The important function of thought in knowledge is most easily seen in the higher forms of mental activity. In reflection and reasoning, recollections, conceptions, distinctions and inferences are successively presented. At first, the succession is too manifold and falls apart. But by a backward movement, and by casting aside what is irrelevant or of little import, thought attains its object of holding the parts together in unity. This is what weak minds fail in doing: their experiences remain disjointed. But in the understanding of ordinary matters there is this same characteristic present in a lower degree: a number of relations, which are successively presented, have to be combined in one consciousness. If any of them disappear before they are united to the rest, the matter is not fully understood. Sometimes, when we are worn out, or sleep is overtaking us, we cannot carry out these combinations in any degree. In the simplest knowledge possible it is more difficult to discern the same universal function of thought. But to know substance and accident even in the concrete, we must combine successive appearances, and view them as passing manifestations of what persists unchanged. So of cause and effect, successive appearances must be held together as determining and determined in the unity of consciousness. Even to be aware of two sensations as co-existent, successive, alike or different, they must undergo the same operation. Without it there would be a succession of isolated sensations, but no knowledge for the subject of them. In that kind of knowledge which involves an element out of relation to consciousness, the representation of it must still be united to the other elements in consciousness. Nor is the combining power of thought more noteworthy than its distinguishing function. For the manifold, which it unites, could never become united, were it not distinguished, and so recognised *as* a manifold.

It is, then, true that the possibility of all knowledge rests on the exercise of a mental activity; but, on the other hand, the possibility of its most important types rests as well on an object which is not due to it, or contained by it in consciousness. It follows that the doctrine which asserts that subject and object "are correlative," "so that an object which no consciousness presented to itself would not be an object at all," or that "knowledge is only of phenomena, and not of anything unrelated to consciousness,"[1] or that to

[1] Prof. Green, MIND vii. 8.

think an object behind thought is "a contradiction in terms,"[1] is not true. The doctrine is due to a confusion between the reality in consciousness, of which these propositions are true, and the reality beyond consciousness, of which they are not. Of course this confusion, which does away with any independent object, is the great boast of Idealism. The only question is, whether it is true, whether it can be carried through without undermining knowledge and without resulting in contradiction? What leads in part to the confusion is that, even if we think an object beyond consciousness, the thought of that object must be in consciousness. So if we look only at the thought or the image—and that is all that we can look at, just because it *is* all that is in consciousness—we easily conclude that an object which pretends to be more than this involves a contradiction. Now this tendency of looking for everything in consciousness is a very common one, and much of Idealism is due to it. Idealists are convinced that nothing can have any meaning for us unless we can trace its presence in consciousness. If we think any object, as an independent world in space and time, they fasten upon the thought, but discern nothing of the reference beyond it. The thought is due to our mental activity, but it is not the thought which we regard as self-subsisting, but its object beyond thought. Again comes the answer that, when we fancy we are concerning ourselves with such an object, we are only bringing a fresh thought into the unity of consciousness, and a repetition of the various mental activities which must be gone through before it becomes an object for us.

As an illustration of the truth which Idealism and Dualism both contain, I may take 'ought' or 'obligation'. It stands between the subject and object, and posits both. For, on the one hand, it would be meaningless if there were no subject conscious of it; and, on the other hand, impossible if there were no possible object for it to apply to—an object which can be found nowhere in consciousness. But this reference to our subject is just what the relations of substance and accident, cause and effect, succession and coexistence, do not imply, nor do they necessarily imply an infinite subject.

I will now criticise Idealism from another point of view.

When the philosophic man reflects on his experiences, however simple, he finds *involved* certain Universal Judgments, that is to say, he elicits them by his reflection.

[1] Principal J. Caird, *Philosophy of Religion*, p. 336.

Now, the interpretation offered may be that experience presupposes these universal judgments as *a priori*, as anticipatory, and not the result of experience. We have, then, to explain how it is, if these universal judgments are from the first necessary to make experience what it is, that there should be a time, which the philosophic mind can fix, when they first rose to consciousness, and that the majority of mankind never discern them? It makes no difference if we substitute, for the term 'universal judgment,' 'ultimate conceptions'. The conceptions which express the underlying forms of unity in the world have had a history for the philosopher. There was a time when they as yet were not, a time when they were dimly and inarticulately felt, and a time when they rose into clear conceptions. The answer which appears most satisfactory to the Idealist is: 'These universal judgments are not necessary to experience in this abstract form, but in the more concrete form of their common use'. This answer, as I shall presently show, involves the admission that they are not necessary to experience at all. I pass to the true and natural explanation. There are certain qualities and relations which are necessary to all objects. What they are, or of their universal application, the majority never become conscious. Only the philosopher, by reflecting on his single experiences, analysing them, comparing them, subjecting them to ideal changes, discerns the unchangeable elements which compose them. This knowledge is possible to him through the form of the universal judgment. The ordinary man is only aware that each thing he experiences is susceptible of change, and yet has some kind of permanence; that its changes are due to some cause; that it has many qualities, and yet that it is one thing; that it has a locality in space, and is or occurs at some point of time. His experience contains these singular judgments, but he does not by an effort of reflection convert them into universals. He does not realise that all things have a permanent element, that all change is impossible without an element which does not change, that all changes are due to a cause or are self-originated, that all things are a synthesis of differences, that all are in time and all of a class in space. Still less does he realise that these judgments have a necessary self-evidence. I hesitate even to say that the singular instances of them which he has are necessary to all experience. For only that is necessary to it which is *explicit* in the most rudimentary and the most developed consciousness. It is true that they are implicit, but so is the universal, and that infallible metaphysic which

has never yet risen to thought. But this means, that through activity of thought these all-embracing judgments may be suggested by, and as it were tacked on to, the judgments which make up the simplest consciousness; discovering to us an universality which extends beyond the limits of consciousness, but in no wise creating it, real as it was before the judgment which asserted it, and will be after this has passed away. This is what the Idealist's answer, which I referred to above, involves—that universal conceptions or judgments are not necessary to all experience, but only singular judgments, which affirm certain qualities of an individual thing, that *are* but are not known or affirmed to be universal. The Idealist's answer may be varied in this way: 'Let us allow that in the consciousness of the ordinary man there is not even the unexpressed judgment, that in all experience a multiplicity must be united in one consciousness, but that what is necessary to him is to be aware that in the experience before him *he* is conscious of a multiplicity'. 'Here,' it may be said, 'is a conception of a permanent subject and a conception of multiplicity, both of universal application. These conceptions we must bring with us to experience, and cannot elicit from experience. Whatever its momentary and mere sensation-qualities may be, it must always possess these permanent attributes.' I shall not consider here how far it is true that the simplest consciousness contains conceptions: that is, whether there must be an activity in it, which connects it as one in certain ways with past experience; or whether the consciousness of difference is not all that is necessary to begin with, any further activity being an after-growth. I only affirm that, supposing it to contain conception, whether it is universal is only known to the reflective man, and only known to him so far as he elicits from his singular judgment the universal, 'that to all experience such or such a conception is necessary'. That is to say, if there is conception in the beginning, it is not conceived to be universal.

The question of the Origin of Knowledge is not our present concern. I have only considered it to some extent here, because this theory of it which I have been combating is one of the supports of Idealism. Even if the universal judgment has been explicit in consciousness from the beginning, it does not affect my main position. We still oppose ourselves to what this judgment asserts if we maintain that its object is in unity with the subject of it, or created by it; and if the judgment contains no back-reference to such a creation by its own subject, it certainly

refers to no other subject. But I am in no wise concerned to deny that there is an activity of some sort involved in knowledge. The singular judgment, which I have placed in time antecedent to the universal, I have admitted to involve a combining and distinguishing activity, whether referable to a supersensible subject or not; but whatever *necessary* qualities it affirms are in no way affected by this activity.

The universal and necessary judgment has this peculiarity, that it is not the result of the combination of any pre-existent elements in consciousness, but is a new form of thought, which has had indeed its conditions, without the fulfilment of which it would not have become, but is not resolvable into them as associated combinations are into their elements. There need not be likeness between cause and effect. We think, because we cannot by manipulation or transformation get the effect out of the cause, that therefore it is not due to it. The fundamental meaning of these words is merely that the consequent is *dependent* on the antecedent; that without its becoming the effect could not become. On the one side of this dependence there may be a molecular agitation, on the other consciousness; or on the one side the individual judgment reflected on in sundry ways, on the other the universal judgment. The old theories of the Origin of Knowledge broke down because of the error of their fundamental assumption. They thought to build up the edifice of knowledge out of the combination of brick and mortar—out of the association of simple elements. They did not recognise in the growth of the mind the development of new types which have indeed their appropriate conditions, but present no likeness to them.

Lastly, I must notice that the universal judgment carries with it its own evidence, which is not an inference from the singular judgments of the same sort which precede it, but which is self-centred and immediate. It may seem strange how the universal judgment, arising in consciousness after the singular and elicited by reflection on it, should not thence derive its evidence. But if we take any singular, self-evident judgment, such as difference of colour or shape, we find that it has succeeded other judgments, and possibly been suggested by them. Now, though all judgments which are not the beginning of consciousness have this mediation that they are preceded by others, they may have immediacy of another sort; they may affirm truth immediately and not mediately through other judgments. It is not more strange that these judgments should be universal than that they should be singular. We think it so from supposing that

ultimately we can only reach the universal by an inductive inference from particulars.

I will add one more criticism. I will suppose the Dualistic position false, that judgment affirms an object beyond consciousness. We are then confined to objects for a subject, to consciousness. We must acknowledge that each object in its unity is due to a combining mental activity, and that the same activity relates objects together. When we next ask, 'Whose is this activity?' we must answer with Kant, 'Ours'. It is *I* that think, compare, distinguish, combine a succession of events, so that they become a consciousness of the series. It is certain that this activity is due to no other self, but only to myself; nor is it referred to an infinite activity, of which mine is a partial manifestation. We may make this assertion, but there is no necessity for it. My mental activity, too, is prone to error, fails often to unify, is dull in distinguishing, is weak in the extent of its combinations both in space and time, is altogether very different from that infinite activity which I conceive has none of these limitations. A follower of Kant may realise how profoundly opposed to common sense and to truth his conclusion is, it being none other, as Hegel says, than Subjective Idealism. He may feel convinced that it is not our activity which creates the objects of experience and all their network of relations. But he has no logical right to thence infer that it is an infinite activity; for when he confines himself to phenomena, to objects for a subject, the activity which he is conscious of is his own; whereas if he does not limit himself to them, but recognises objects of knowledge which are independent of consciousness, there is no necessity to bring in a subject at all to explain the possibility of the object. He cannot obtain the advantages of both views. He cannot borrow from Subjective Idealism the basis of his theory, that all objects are due to a subject, and from Dualism quite another kind of object, and then offer to reconcile their principles by inserting a reference of all objects to an infinite subject—a reference which is certainly not self-evident.

The instinctive reasonings of unphilosophic human nature lead it universally to Dualism, and this is in itself strong evidence of its truth; but it must be also admitted that, from the point of view of religion and the heart, it is often supplemented by an Idealism, which is not in opposition to it, but which it cannot prove.

Now Dualism need not look at the object as wholly independent, or place "the origin of our knowledge exclusively

in the object ".[1] It is only those necessary relations, which are made known to us by the Universal Judgment, which the nature of the mind cannot in any way make or affect; just because they are not *made* but only *are* from all eternity. But those accidental qualities of objects, which are subject to change, in all probability are affected in their appearance by the peculiar nature of mind. When the Problematic Judgment refers to them, its special object, though it must transcend the unity of consciousness, may only possess reality for a future consciousness.

But we have not yet considered the great objection to Dualism which is due to a historic difficulty connected with it. This difficulty was insuperable in the mind of Kant. He expresses it substantially as follows. He says, if our conception and intuition have to conform to the nature of the object, he does not see how we can know anything of it *a priori*, or have any necessary or universal knowledge of it; for our experience can never prove strict universality. But if the object has to conform to our conception and intuition, then his difficulty vanishes.[2]

Prof. Green expresses the same difficulty more clearly and forcibly. He says, if we cannot say that Understanding is not only "necessary to our conceiving an order of nature," but further that it is "the source, or at any rate a condition, of there being these relations, . . . we are left in the awkward position of having to suppose that while the conception of an order of nature on the one side, and that order on the other, are of different and independent origin, there is yet some unaccountable pre-established harmony through which there comes to be such an order corresponding to our conception of it". The question is, why the order of nature and our conception agree? As may be supposed, I am not going to consider the agreement of anything accidental in that order, but only, to put it in my own way, why all objects, since they are independent, should conform to our Universal Judgments. To this I oppose another question, 'Why should they not conform?' The answer, the only answer, to it is, that experience convinces us that independent things may vary; that even if they are like in the beginning they may become different by subsequent development. But if we consider this experience we find that individuals vary in certain of their qualities, not in others. We never find them losing permanence, relations

[1] Lotze, *Logic*, p. 457.

[2] *Critique of Pure Reason*, Preface, 2nd Ed.

of cause and effect, relations in space and time. However independent they are, they never vary to such an extent as this. When we take the teaching of experience vaguely and uncritically, it may suggest such an absolute variation. But it really gives us no warrant for it. On the contrary, it offers the strongest probable grounds from the Uniformity of Experience hitherto for believing them to be universal. So it turns out that experience yields a different answer to what was expected, and repudiates the doubt which it was made responsible for.

We will now return to the first question. We may express it differently in this way—how our Universal Judgments are true. What suggests the question is the sense of the finite number in consciousness and the independent infinite beyond. But, as we have seen, the basis of this question is a confusion of what experience does and does not show. We have now to notice that the question independently of its origin ought never to be asked; for the words 'how' or 'why,' which we prefix to it, imply that there is some extrinsic ground from which we may demonstrate the universality which the judgment asserts. Such a ground must always presuppose what it seems to prove; for though we may deduce an universal judgment in the particular, we never can deduce the universal judgment in general. Now it is just this which the question we are considering assumes that we can do. Yet we often attempt to answer it, for it is strangely persistent. Sometimes the answer only soothes our perplexity for a time, sometimes constitutes an era in philosophy. But the grounds which it offers are always fallacious. The answer may be that there is a pre-established harmony between Thought and its Object. It demonstrates this universal agreement by means of a single all-embracing judgment, which it assumes at the outset is in agreement with its object. Again we may say our Universal Judgments are true, because Space and Time and the Categories of the Understanding are the *a priori* conditions of all objects of possible experience, because no object can be experienced, or become an object for us, unless it conforms to these conditions. But how is this last synthetical and universal judgment proved on which universal knowledge as a whole depends? It was to explain its possibility, but it only reasserts its inherent necessity in other language. How can I prove the universality of these conceptions, now and through all time, unless I accept their own self-evidence? and, if this self-evidence is satisfactory, why search for other grounds which are always illusory? But, as I have said,

the doubt which dwells upon the possible want of conformity between Thought and Being is most persistent: it is also most natural; for it is the result of countless experiences, which have shown us how independent of our thought is the object, and, being independent, how liable to variation. But we have not made the nice distinction in our experiences between the two kinds of qualities; this only suggests itself to us on reflection. We must then accept the self-evidence of the Universal Judgment in the abstract, it being left us to decide in each case which judgment, that takes the name, is really what it asserts itself.

Lastly, I notice that not only is the basis of the doubt a misconception, the interrogative form in which it expresses itself false and delusive, but even the doubt itself is apparent, not real. For it is only when, owing to the great instability of abstract thought, we materialise the conception of these universal qualities and relations, that we can doubt their universality, or feel that it wants any reason or ground to be given for it. In moments of clear insight we do not require this: we see it to be needless and impossible; but the abstract thought becomes a materialised image, importing along with it that possibility of change which the relations it symbolises never possess. Then we ask why two changeable things which are independent should harmonise; and we are very perplexed.

I conclude, then, that there is no need of bridging the gulf which Dualism involves by any form of Idealism. For its difficulties are not inherent, but owing to confusions of the mind. The fact remains that, however we seem to bridge it, we can never bring the infinite array of objects and their infinite forms within the human and finite consciousness. So this Dualism of the Finite and the Infinite for ever survives, and Judgment alone transcends it; even if the Infinite is a mind like ours—only infinite.

V.—DISCUSSION.

HALLUCINATION OF MEMORY AND 'TELEPATHY'.

By Professor Josiah Royce.

I have for some time intended to collect material in support of an hypothesis bearing upon the discussions aroused by the book entitled *Phantasms of the Living*. My hypothesis needs yet a good deal of examination before it can be of much service to anyone; but the present state of my health obliges me to suspend all work for some time, and I must leave this, like other matters, in other hands. If there be the least shred of value in my suggestion, I ought not to keep the thing to myself, unless, indeed, some one else has already anticipated me. If this last is the case, let what I say go for nothing. But if the suggestion, in its present form, is at all new, may some one be found more capable of testing it than I now am.

As an occasional worker in connexion with the investigations of the American Society for Psychical Research, I have tried to do something towards testing the stories furnished us as evidence for 'Telepathy'. The stories that come to hand, in so far as they are worthy of attention at all, seem to me, like the stories in *Phantasms of the Living*, to fall into three classes. The first class is the smallest, and is so small as yet that one can make little or nothing of it. It consists of those cases, valuable enough were they only more numerous, where the 'telepathic' coincidence, whatever it is, can be actually demonstrated by trustworthy contemporary records—*e.g.*, cases where the percipient A demonstrably wrote in a letter or in a diary "*I believe that* B *is ill*," or "*drowning*," or otherwise uncomfortable, *before* the coincidence could have been verified. I think that we may safely declare such documentary cases to be at present too few and scattered to serve as a foundation for any noteworthy hypothesis. All recorded cases of the sort are therefore *probably* mere coincidences. If we ever get them by hundreds or by thousands, we may have more reason to lay stress upon them.

The second class of cases is very large and, in the discussion about 'Telepathy,' is very insignificant for any present and positive purpose. It includes all those cases reported orally, and from the mere memory of even the most trustworthy people, *where the events lie in the remoter past*, say beyond ten years. 'Telepathy' will never have standing as an hypothesis if its facts, like rainbows, are always inaccessible to the recording observer. To say that the 'telepathic' phenomena always belong more than ten years back would be to say that they

belong nowhere. The already recognised errors of memory would make such distant cases valuable only as auxiliary and supplementary evidence in favour of 'telepathy,' were the 'telepathic' hypothesis otherwise almost wholly certain.

The *third* class of cases consists of *stories of recent date*, told by people of good character and of generally sound memory, whose 'telepathic' experiences have been sporadic, and who are *not* themselves open to the charge of being systematically or superstitiously imaginative. That such stories are comparatively frequent, and that they cannot be dismissed as mere folk-lore, or as mere superstition, or as mere fraud, Mr. Gurney's book has pretty clearly shown. Now my hypothesis concerns not all of these stories, but a very large proportion of them. I ask myself: 'Why should people who have no interest in believing in telepathy, who are themselves often despisers of the whole idea, and also haters of all superstitions, whose own personal honesty is undoubted, and whose memory is generally good—why should such people suddenly believe and relate that, at some very recent time, just before an affliction, or at the moment of a calamity, they knew, or were warned, by dream or presentiment, of the distant and, for them, otherwise unknowable fact of the affliction or calamity in question? Why should such tales be told at once, or very soon after the accident, and before the *ordinary* errors of imaginative memory could have time to distort the facts? Why should the experiences be sporadic for such people, so as to be almost wholly isolated in their lives, and so as not especially to affect their beliefs thenceforth?' And I answer these questions, hypothetically, by suggesting that in such cases we probably have to do with a not yet recognised type of *instantaneous hallucination of memory, consisting in the fancy, at the very moment of some exciting experience, that one has* EXPECTED *it before its coming.* Such an hallucination might of course be as irresistible as a delusion of the senses often is. Two or more persons among those concerned in any case might be equally subject to it, and then their stories would corroborate each other. On the other hand, as some peculiar state of health or some peculiarly painful excitement might be required for its appearance in any one person, a given sane and sound individual might plod on for years without any 'telepathic' experiences, and then at the very moment when he heard of his brother's death might with a sudden assurance exclaim: 'How strange! I dreamt of receiving this news only last night, and have been oppressed in mind by the presentiment all day.' Members of the same family would be especially apt to be similarly subject to this form of illusion, and then the same news would show them all the same mirage of memory, with startling results in the way of 'telepathic' evidence. As for mere supplementary corroboration, taking the well-known shape of a friend's assurance that he 'believes the story to be true as it is told, for the people directly concerned assured him of its truth

from the very first,'—all that would be forthcoming in a very few weeks, and with the best intentions on the part of all concerned.

The illusion of double memory in one familiar type, *viz.*, in case of the feeling that one 'has been here before,' is universally recognised. This newly-suggested form of instantaneous hallucination is *a priori* just as probable as that old and well-recognised form. Its existence, however, is hard to verify, because while the double memory of the first and well-known type at once corrects itself through the sane knowledge that we are *not* living our lives twice over, the illusion of the second kind might persist as long as you please, either in the form of a general belief in presentiments, or else merely in the shape of an isolated 'telepathic' experience that one looks back upon. Even so diplopia is self-correcting for a normal consciousness; but a projected hallucination of vision is not so self-correcting. Such might also be the case with the two illusions of memory.

But, of course, to verify this hypothesis even remotely requires more than such *a priori* suggestions. And it has occurred to me that the best course would be to ask whether any such hallucination of memory as my hypothesis demands is ever observed among the actually insane in asylum practice. I have consulted the literature to this end, and for some time had little success. Krafft-Ebing (*Lehrbuch der Psychiatrie*, ii. 146) mentions one case where a patient suffering from "Primäre Verrücktheit" was accustomed to say that, as he fell asleep at night, he sometimes heard voices telling him what he was to dream that night, and he dreamt accordingly. This looks like our desired form of hallucination of memory. But only recently, and very opportunely, have I met with two cases, fully described, in the *Archiv f. Psychiatrie* (xviii. 397), by Prof. Emil Kraepelin. Kraepelin himself had already distinguished the very class of hallucinations of memory of which I was in search. He speaks of it (*l. c.* p. 395) as represented by "a small group of observations". He classifies the cases as those where the patient, with perfect consciousness of his real surroundings, regards these surroundings as in some respect familiar or expected, because a supposed previous warning has given him notice of what was to come. Kraepelin adds that he himself has sought in vain through the literature for any previous account of such hallucinations. Of the two cases the first is less marked. A servant-girl, twenty years of age, is taken ill first with hallucinations and general excitement, and these pass over into what Krafft-Ebing has called Erotomania, *i.e.*, innocent love-madness of the Elaine or Ophelia type. The actual lover had in this case been a soldier. In her madness the girl converts him into a prince, and expects a wonderful future. In the asylum she declares, from time to time, when a new event attracts her notice, that her lover not long since predicted it to her. So a change of physicians in the asylum has been prophesied to her. And, in particular, when she is sent away to another place, she remembers at once precisely

how her lover had predicted this event also, and in what words. The second case, which Kraepelin regards as "quite classical," is one of "Primäre Verrücktheit". A young commercial traveller, who from childhood up had been eccentric, ill-tempered and foppish, devoted to fine toilets and to money-spending, but otherwise free from vices, first makes himself impossible in business by continual quarrels, and then begins to discover that he is a person of consequence, whose life is the object of great consideration on the part of both friends and enemies. The *Fliegende Blätter* publishes paragraphs about him; the journal *Ueber Land und Meer* makes caricatures of him. At last he reads in the newspapers that he is a promising pretender to the throne, and so he reaches the asylum. He appears at first very cool and rational, and evades discussion of all delicate topics. But at length he begins to confide to the physician his curious observation that nearly all the patients in the asylum are known to him from previous experience or from warnings. In fact, he heard in conversation some time before he reached the asylum all the details concerning everybody there, and concerning the management of the establishment. Characteristic is his assertion, given in Kraepelin's words (p. 399), that when he heard these things spoken of before he came, the matter did not especially attract his attention. But when he saw the various things and people, these reminded him ere long, he said, of the previous conversations. Such assurances from the patient were not in this case occasional incidents, but soon became fixed features of the illness. The asylum, so the patient said, had once been described in detail in the *Fliegende Blätter*. The chapel also appeared well known to him from previous descriptions. The news of the day was sometimes a matter not so much of direct presentiment to him as of curious and imperfect coincidence with long past conversations. Thus, a murder being committed in Munich, he remembers, after hearing of it, how he had not long since been asked about that very street where the murder was committed. In short, his abnormal memory gave him, in the form of somewhat slowly formed but always irresistible hallucinations, all our own best-known types of reported presentiments. Meanwhile he possessed an actually very good memory for real events. In addition to the illusions of memory, the same patient had elaborate systematic delusions, which included, among other things, the discovery that a great quantity of what he read in the papers had been really composed by himself.

Had I not been in search of evidence of the possibility of this form of hallucination, I should probably not have read Kraepelin's article, at least at the present time. I hardly need add that I find in his discussion no effort to draw analogies with sane presentiments of the type discussed in *Phantasms of the Living*. The fact, however, mentioned by Kraepelin (*l. c.* p. 428), that our so well-known hallucination of the ordinary double

memory-consciousness appears almost exclusively among the sane, encourages me to suppose that this new form of double memory, once verified as an existing fact among the insane, may be found to be an incident of normal life sufficiently frequent to explain a large number of 'telepathic' incidents. At all events, if there is any fair chance of such an explanation for stories that are not based upon purely documentary evidence, nearly the whole mass of narrative facts in the *Phantasms of the Living* will have to be reviewed with this hypothesis in mind.

The foregoing suggestion, as soon as formulated, seems so simple and commonplace that I should not have ventured to bring it forward here had I found Messrs. Gurney and Myers apparently well aware of the force of such a consideration. I have looked in vain in *Phantasms of the Living*, as well as in Mr. Gurney's reply to Prof. Preyer, for evidence of any consciousness of this hypothesis. I need not say that the value of the collection of stories in *Phantasms of the Living* is in no wise affected for scientific purposes by the discovery that these stories may prove rather the existence of a typical hallucination of the human memory than the reality of 'telepathic' communication between mind and mind. If it is the truth as such that we want to 'bag,' it is not ours to decide whether the truth shall turn out to be a wild goose or some other fowl.

ON "FEELING AS INDIFFERENCE".

I. By James Sully.

The discussion on the alleged indifference of certain feelings, begun by Prof. Bain in No. 48 and followed up by Mr. W. E. Johnson in No. 49, is to be specially welcomed as promising to render a little less obscure one of the most perplexing points in psychology. My excuse for joining in it is not that I am likely to have anything conclusive to add, but that, my name having been mentioned by both writers, I feel in a manner obliged to express my view of the subject more fully than I have yet done.

Before entering upon the special question, I should like to put myself right with respect to a point related to this which is touched on by Mr. Johnson. Mr. Ward would, I think, be the first to admit that, though he has freshly emphasised the fact of the connexion and co-implication of the three constituents of mind, others before him have called attention to the fact. As regards myself, I stated the point insisted on by Mr. Johnson in almost his own words when I wrote, "Feeling, knowing and willing are *properties* of mind, and cannot exist in perfect isolation from one another any more than the colour, form and odour of a plant" (*Outlines of Psychology*, p. 22).

To quote but one other writer, G. H. Lewes describes every mental phenomenon as a "triple process" in very much the same way as Mr. Ward himself does, though no doubt he conceives the factors in this process somewhat differently (*Problems of Life and Mind*, 3rd Series, Prob. iii. ch. 2). But while psychologists have seen that the constituents are always present in every concrete mental state, they have seen also that they are not uniformly present in the same degree of distinctness and prominence. Were it otherwise, there could, it is safe to say, be no such thing as psychological analysis at all. The present difficulties, which are great enough, would then prove to be quite insurmountable. This fact is brought out by all schemes of psychological classification, which seems to me a thoroughly legitimate process when understood to be just what it aims at being, and not more than this. Even Mr. Ward himself, by the way, cannot help winding up his analysis by a rudimentary classification when he gives his two "forms" of psychosis as "more or less distinct".

To come now to the real point of dispute. The discussion has already been of service by resolving the problem into two: (1) Is there in addition to the well-recognised qualitatively distinct varieties of feelings, *viz.*, the pleasurable and the painful feelings, a third variety distinguished by the qualitative differentia of neutrality or indifference? (2) Even supposing that all feelings are qualitatively marked off by the characteristic colouring of pleasurableness or its opposite, is there not another aspect of feeling, *viz.*, Excitement, which, since it does not uniformly vary with the degree of pleasurableness, requires to be specially considered? The differentiation of this second question was begun by Prof. Bain in his note, but was only completed by Mr. Johnson. It may be as well to say at once that if the problem be thrown into the second form, this amounts to a serious shifting of the ground. Obviously if this is the only point of dispute, the expressions "neutral" or "indifferent" feeling, "indifference of feeling" and the like are out of place. In the following remarks I shall assume that Prof. Bain at least holds by the contention that many feelings, if not, as he formerly said, a large majority, are strictly or approximately neutral, that is, destitute of all specific colouring from agreeableness or disagreeableness. It will be my chief business to dispute this proposition. On the second question, I have only one or two conjectural observations to offer.

1. Are there feelings which are neither agreeable nor disagreeable? This question, it may be observed at the outset, is independent of the other question, whether every psychical phenomenon contains an appreciable constituent of feeling. For although, as Prof. Bain points out, Reid based his plea for neutrality on sensations in which the feeling-tone, to say the least, is very inconspicuous, he need not have done so, and Prof. Bain himself evidently thinks the safer ground to be mental states where the feeling-tone is highly conspicuous. With him

we may best begin by considering the clear undisputed instances of feeling that are said to be hedonically colourless.

If we question the common consciousness, we seem to find, what perhaps Prof. Bain would not dispute, that feeling is commonly described in language that points to the distinction of the agreeable and disagreeable. Pleased and displeased, attracted and repelled, satisfied and dissatisfied—these and similar terms are the current symbols by which we indicate the effects on us of the various impressions of our surroundings. It may, no doubt, be said that we frequently speak of being excited without distinctly referring to the mode of the excitement. But this is hardly conclusive; for it may be rejoined, that what is commonly meant by such a state of excitement is a condition of feeling of a decidedly pleasurable hue. This seems to be implied in such current expressions as the 'love of excitement,' a love sufficiently attested in the case of most healthy young people by the amount of painstaking gone through beforehand to secure it, even when it is known that the indulgence will probably be followed by a disagreeable sense of fatigue.

While popular language thus suggests that excitement is in the main pleasant, it clearly points also to another side of the experience. The distinctly unpleasant flavour connoted by the terms 'shock,' 'shocking,' suggests that excitement so far as it means the effect of sudden and violent stimulation is disagreeable.

Lastly, I think no one will dispute the proposition that when ordinary persons talk of feeling indifferent, what is meant is absence of feeling altogether. To be indifferent about others' opinion or some political question is not to be affected by it at all. Plain folk do not say they are indifferent when excited.

So much for the appeal to the unanalysed consciousness of the vulgar. In passing to a scientific analytical consideration of the subject, two points must be made clear at the outset. (*a*) Pleasant or agreeable, together with its opposite, must, as in discussions of Hedonism in Ethics, stand for all discoverable degrees of this quality, and not merely, as is apt to be the case in the common use of language, for the higher degrees of intensity. (*b*) A mental 'state' is in reality a movement involving a continual change of elements, and a constant fluctuation in the accompanying feeling-tone.

Bearing these points in mind, it seems to me that the instances of feeling relied on by Prof. Bain fail to warrant his conclusion. I at least know nothing of a state of mind called surprise which is neither pleasant nor unpleasant in some degree, though it may very well be both. Surprise means first of all shock, which is momentary disturbance, involving incomplete 'apperception' and sense of confusion. In ordinary cases, however, when something short of a miracle is happening, the disagreeable feeling of disturbance begins at once to give way to a pleasant form of consciousness, the accompaniment of the acceleration of the mental processes due to the stimulus of the new and strange impression. Thus the whole experience is best described as a

transition (or rapid series of transitions) from a feeling of confinement or contraction to one of liberation or expansion, an experience that is decidedly exhilarating. Hence probably the craving (in vain objected to by Lessing) for surprise in the drama and in fiction. In truth the feeling of surprise seems to very well illustrate the general conditions of pleasurable feeling as formulated, to quote a recent authority, by Mr. Ward.

The essential circumstance here, a transition from an unpleasant to a pleasant consciousness, seems to enter into and to determine other feelings which at a first glance might appear to be colourless as regards agreeableness. Thus all anticipation of a known result which we desire involves vivid pleasurable ideation interrupted, and one may add intensified, by momentary sense of non-realisation. Such anticipation is pleasurable as a whole within certain limits, though, as we know, "hope deferred," &c. The fascination of uncertainty again, as illustrated in the popularity of games of chance, of a well-constructed plot, and so on, is probably to be explained as the result of the intensified activity called forth by a teasing sense of ignorance and incapacity. Similarly, a good deal of the excitement springing from nervousness and timidity, as in undergoing an examination or speaking in public, seems to be a specially exalted form of consciousness provoked by a sufficient and not excessive painful stimulus.[1]

Such states of emotional excitement, then, may very well be regarded as mixed states of feeling, analogous to states of pity and those feelings of fear and pity excited by tragedy, which are confessedly not indifferent, and where (as Hume plainly showed) a subordinate element of painful consciousness is the condition of an intensified pleasurable consciousness. The essential circumstance throughout is a transition from a low to a high hedonic level of consciousness.

So far as to the indifference said to be discoverable in clear and undoubted instances of feeling. We may now turn for a moment to the more ambiguous examples of feeling, as ordinary sensations of hearing, sight, and possibly certain forms of intellectual and volitional consciousness. As already hinted, I do not consider the determination of the question whether these have a colouring of pleasurableness necessarily involved in our discussion. I should be quite ready, in spite of Mr. Johnson's protest, to agree with Prof. Bain that they might be viewed as cases where the feeling-element becomes evanescent, and so might be disregarded in the discussion. Nevertheless, it may be as well to observe that in the measure in which these mental states are wanting in hedonic character they seem to be wanting in all the characteristics of feeling. Most people, I imagine, would say that a common recurring sensation, say the sight of a very average bit of dully-lit

[1] Mr. Kinglake in *Eothen* gives a striking instance of this exaltation of pleasurable consciousness by a sub-conscious fear in the description of his state of mind at Cairo when the plague was raging. Going about sight-seeing was rendered the more exhilarating.

grass, or the touch of a book cover, does not apparently affect us at all, and certainly has nothing exciting about it. I may, however, add that I am privately of opinion that all sensations (according to their quality and quantity) are fitted to please or displease, though, owing to the well-known effects of repetition, inattention and diversion of attention to their signification, we overlook and may grow insensible to the effect. This seems at least to be clear in the case of sounds, where the great distinction between musical tones and noises certainly answers in the main to a pleasant and unpleasant mode of excitation. And the effect of artistic education in extending the range of sensuous pleasure points to the same fact. I am disposed to think too that all intellectual activity tends to be agreeable or disagreeable according to its varying conditions, and that Prof. Bain's feelingless absorption in the pursuit of some end is attended with a very distinct feeling-tone, which again may fluctuate according as consciousness of advance or of arrest preponderates. Hence I am disposed to conclude that all feeling exhibits one of the two contrasted colourings, and that since all varieties of consciousness have some feeling-concomitant, however faint, pleasure and pain are coextensive with our mental life.

2. Is Excitement another aspect of feeling, which, though always coexisting with hedonic quality, is in a manner independent of this?

As already hinted, I do not propose to discuss this question fully. I think before the point can be satisfactorily settled the idea of excitement must be rendered clearer. How, for example, is excitement to be distinguished from quantity of consciousness, *e.g.*, from intensity and mass of sensation, or rapidity of ideational process? Again, is excitement anything more than the higher degrees of intensity of feeling itself? And here it becomes necessary to investigate very carefully the relation between intensity and colouring of feeling. I should be very slow, for example, to concede to Mr. Johnson, except after a searching investigation, that all feeling runs up at last like colour into a neutral white. Is the ecstasy of a devotee or of a martyr colourless? Once more, do all feelings alike exhibit this excitement, the so-called depressing emotions as much as other varieties?

These are some of the difficulties that I experience in trying to conceive of excitement as an additional "dimension" of feeling. But in truth the shifting of the problem in this way seems to point to the impossibility of conceiving of feeling otherwise than as hedonically coloured, and this may well satisfy those who deny the alleged indifference of feeling.

That no feeling can be strictly indifferent seems to me to follow from the definition of it as that which when thought about always appears in a peculiar sense as a subjective affection, an alteration of our condition. For any such alteration must, it would seem, be in the direction of elevating or depressing, of furthering or hindering, our conscious life.

II. By Frances A. Mason.

What Mr. W. E. Johnson has said on this subject, in Mind No. 49, seems to me all valuable and nearly all true; but there are one or two points which it may be useful to consider more closely.

Prof. Bain's case does not appear to be proved (as indeed Mr. Johnson says) by the indisputable fact that we can "produce instances of states of mind which may be considered as equally pleasurable or painful, but which have a different degree of excitement"; for the question remains: What is this excitement? Is it a distinct element in a state of mind, or can it be resolved into Cognition, Volition, or Feeling as Pleasure and Pain?

Let us make the experiment, roughly, in the cases offered to us by Prof. Bain and Mr. Johnson.

Reid's "intellectual sensations" are merely cognitions in a state of mind of which they form the main element, leaving little room, or affording little occasion, for either feeling or volition. And in this state of mind there is little neutral excitement.

On the other hand, the strong excitement of anticipation of the result of an election appears to consist largely of volition. It is what Dr. Ward would call a complete state of mind, an emotional state; and it might be analysed into—(1) a great deal of desire to know the result, &c.; (2) a little cognition, or acts of imagining the results, &c.; and (3) quickly alternating pleasure and pain depending on these represented results.

Much the same analysis might be made of rage, as Mr. Johnson describes it, in which there is much neutral excitement. The pain in this emotional state is caused by representation of the injury done by the object of the rage, while the pleasure which is said to be found in it must be due to representation of future acts of revenge; *i.e.*, there is a great deal of volition, not baulked but working itself out.

Again, in falling asleep, and in quiet despair, where pleasure and pain are "saturated," we find a minimum of volition. The despair here spoken of is, of course, despair proper, *i.e.*, hopelessness: nothing to be hoped for, and therefore nothing to be done or willed; directly hope is admitted, the despair becomes "violent despair," full of volition and action, and at the same time comes in neutral excitement.

In all these representative instances we find neutral excitement varying with volition so far that volition sets a superior limit to excitement. Suppose that this relation holds universally. Is the excitement a cause of the volition? Or can we say that it is itself volition in its most rudimentary form—the raw material of what we recognise as volition, something implied in the Uneasiness of Locke and in the *Conatus* of Spinoza?

If so, then, as regards Mr. Johnson's third point, excitement is simply nascent action. As regards his first, we find more difficulty. But we may say that we do not attribute volition to material things, and that, as being merely the raw material of

volition, neutral excitement is too indefinite either to be associated with presentations or to attach to separate elements in presentation. And, if considered as widely distributed or scattered attention, it would be subjective in Dr. Ward's scheme.

As to passivity, though it looks like a contradiction in terms to speak of passive excitement, yet such a contradiction often means merely that one of the terms is ill-chosen; and this may turn out to be the case here. If neutral excitement is feeling, excitement will be a misleading name for it. The question is best decided by introspection. Is "neutral excitement" passive or not? If not, then it is volition without more ado. If so, there is apparently in our experience an element which, not being pleasure or pain, is yet distinguishable from any mode of volition.

I think the two alternatives must be analysed together, for this reason—that neutral excitement itself admits of analysis. We have seen how closely on the one hand it is connected with volition; and analysis of my own mental states seems to yield this raw material of volition as one distinguishable element in neutral excitement, but as not the whole.

What is left, then? A *tertium quid*, distinct from pleasure and pain, but more like them than like anything else, and therefore to be classed with them under the head of Feeling? I think not; for I think what is left *is* pleasure and pain.

Working from one end, Prof. Bain and Mr. Johnson have shown how much it has in common with pleasure and pain. Now in what does it differ from them which may not be accounted for by its being a mixture of the two? I think we shall find that its special characteristics are just such as we should expect from this admixture. There is not space to attempt to show this in detail; but it may be worth while just to point out that there seem to be, as Prof. Bain says, different "modes" of neutral excitement. There ought, indeed, to be as many modes as there are varieties of admixture of pleasure and pain; some of which Mr. Johnson touches upon, noticing their "fusion" in certain emotions, and at other times their rapid variation, dependent on the alternate intensifying by attention of the presentations involved.

And, to begin from the other end, what happens when pleasure and pain are experienced together? Do they annihilate each other? Do they not rather neutralise each other, and is not the result simply neutral feeling?

It may be denied that pleasure and pain are ever experienced together. And I would not say that pleasures and pains are experienced at all; it may be quite true that all pleasure, as such, is one and alike: that feeling, as Dr. Ward says, varies only in sign and quantity. But though we may have Feeling and not feelings, no one doubts that we have cognitions and not Cognition, which is a concept and not a concrete experience. Presentations are continually experienced together, each of which, taken alone, would cause a certain amount of pleasure or pain. What, in actual experience, happens to these amounts?

An attractively simple answer would be to add up the respective amounts of positive and of negative hedonic effect, and subtract one sum from the other, leaving a surplus of either pleasure or pain, or a hedonistic zero. And, no doubt, there is a great deal of truth in this answer. If a man, at a given moment, could be made to choose between being annihilated next moment or going on living *ad indefinitum* with exactly so much pleasure or pain as he was then feeling, no doubt his best plan would be to make some such calculation, and live or die accordingly. But the fact of his being able to make such a calculation implies that this result of addition and subtraction does not really represent the actual state of his consciousness. The actual amounts of hedonic effect are what he somehow gets hold of and manipulates. The well-known difficulty—how we can estimate what is not presented, need not disturb us here; for we cannot in either case escape it except by denying it: if the several amounts of feeling cannot be estimated because they are only felt and not presented, the same must apply to their result. And what we seem to find by introspection is an indefinite number or mass of simultaneous presentations, few, if any of them, hedonically indifferent, but each causing a certain amount of feeling which keeps varying with the intensity of the presentation; this intensity itself varying, other things equal, with the amount of attention directed to it.

But since attention cannot be concentrated wholly on one presentation, we are, at any one time, attending, more or less, to them all, and are hedonically affected by them all. Some of them give pleasure, and some pain; therefore we are, at any one time, hedonically affected both positively and negatively. That is to say, our feeling, at any one time, consists of both pleasure and pain, is both pleasure and pain, is, then, so far as neither predominates, neutral feeling.

If this is true, then Prof. Bain is right in saying that there is neutral feeling as well as pleasure and pain; only we recognise in his neutral excitement an unanalysed element of volition. And Dr. Ward is right in saying that feeling is nothing but pleasure and pain; only, in our view, feeling may be, at any one time, pleasure *and* pain, not necessarily pleasure *or* pain.[1]

It only remains for me to say that if this suggested solution of the difficulty appears presumptuous, it would appear so to no one more than to myself if I did not intend it merely as a suggestion. I have stated it as baldly and unreservedly as possible; first, because I have so many doubts about so many points in it that it was useless to mention the few for which there might have been space; next, because the simpler the form of an error, the more easily is it exposed. And I hope some one will take the trouble to refute this, if it is wrong. For like reasons, I have not thought it worth while to enter on other lines of argument which seem to me to lead to the same result.

[1] If there are states of mind in which there are no pleasant or no painful presentations, we are not concerned with them here.

VI.—CRITICAL NOTICES.

Hegelianism and Personality. By Andrew Seth, M.A., Professor of Logic, Rhetoric and Metaphysics in the University of St. Andrews. "Balfour Philosophical Lectures, University of Edinburgh," Second Series. Edinburgh and London: W. Blackwood & Sons, 1887. Pp. xi., 230.

Et tu, Brute! The kindly rehabilitation of Reid in Prof. Seth's first series of Balfour Lectures and the suggestions in their concluding paragraph of problems unsatisfactorily treated by Hegelianism had hardly prepared us for the fierce blows here bestowed upon the "Neo-Kantians". But, though at first one is apt to think this attack by a friend of Idealism 'the most unkindest cut of all,' yet undoubtedly the most valuable of criticisms is that made by some one who has himself seen from inside the position he is criticising. Not only does Prof. Seth express in the strongest terms his own "great personal obligations to Hegel" (p. 229), but he has in an eloquent passage (p. 59) spoken of the feelings experienced by those who have lived through the phase of thought represented by the Idealism of Fichte or of the late Prof. Green. Moreover, though we have indications (*e.g.*, p. 20 n., p. 109) of a gradual change or modification in some of Prof. Seth's opinions, even in the work before us he still accepts as the starting-point of philosophy the Kantian problem, *viz.*, an analysis of knowledge "with a view to discover its indispensable constitutive elements" (p. 16), and he accepts Kant's proof "so far as it asserts that these forms [of space and time], and with them these categories or principles of mutual relation and explanation, are necessarily involved in our experience of the known world, and that without them no knowledge would be possible at all" (pp. 10, 11). "The central position of Kantian and subsequent idealism" is also accepted, *viz.*, "the necessity of a permanent subject of knowledge" (p. 11). "All knowable existence is existence for a self" (p. 12). But while Prof. Seth rejects Kant's own retention of "things-in-themselves," as unknowable cause of the "matter" of knowledge (a retention inconsistent with restriction of cause to the phenomenal sphere), neither will he now accept the system of idealism reared upon Kant's foundation.

In the second lecture, which deals with Fichte, it is pointed out that the position of Green bears a closer resemblance to that of Fichte than to that of Hegel (p. 39). This is a very true remark, particularly so with respect to ethics (cp. p. 209): it is all the more interesting because, so far as I know, Green himself was never in any special way a student of Fichte. Perhaps the element of moral enthusiasm in both of them—an element somewhat lacking in Hegel—is the real explanation of the resemblance.

Prof. Seth's quarrel with Green is that he deifies the unifying principle in knowledge, like Hegel, converting logic into metaphysics or ontology. Now, how, we would ask, is an acceptance of Kant's central position compatible with the belief in any possible science of ontology or in any metaphysics distinct from the transcendental logic or theory of knowledge? What is this "reality" which is perpetually set up over against knowledge and in comparison with which knowledge is despised? The only answer we can find in Prof. Seth's book is that "the individual alone is the real" (p. 128). Hegel and the Neo-Kantians are condemned, as Plato is condemned by Aristotle, for making the universal the real. But what does Prof. Seth mean by "the individual"? That question is nowhere distinctly answered. On p. 125 it is said: "The meanest thing that exists has a life of its own, absolutely unique and individual," &c. Is it implied that a fragment of stone, for example, is such a "real individual"? The fragments of this will in turn be real, and so on till we come to the atoms. And on p. 124 we are told that "even an atom is more than a category". Now, what is an atom except a category—a conception by help of which we may find it convenient to make the world intelligible to ourselves? If the reality of things consists in their being composed of atoms, then it follows that their reality consists in their being thought. Again, how can we know any individual except in its universal aspect? Is not the individual unknown just in so far as we cannot universalise it? so that the real would then appear to mean the unknown, if not the unknowable. But in *Scottish Philosophy* (p. 203) the Unknowable received its quietus. If, however, the real is the unknown, reality must disappear with the advance of knowledge. On the other hand, on p. 118 it is said: "That there is a world at all, we know only through the immediate assurance, perception or feeling of our own existence, and through ourselves of other persons and things". The "assurance, &c., of other persons and things" obviously cannot be "immediate"; for that would contradict "through ourselves"; so that the ultimate real must be the self—a position which would quite coincide with that of idealism.

But it will be said: "The real is the individual self, not the universal self, the latter being only a logical abstraction". And on pp. 29, 30, 218, we are told that the universal Ego is only a hypostatised abstraction. Now, surely Prof. Seth does not deny that "universal" (*καθόλου*) has another and a more important meaning than a sum of individuals. The individuals apart from the universal are as much an abstraction as the universal apart from the individuals; and this is admitted on pp. 215, 216, where it is said: "The mere individual is a fiction of philosophic thought". How, then, is the individual any more real than the universal? "There could be no interaction between individuals unless they were all embraced within one Reality" (p. 216). But what is this "reality" (with or

without a capital letter) except the unity of the cosmos? and whence do we get this unity except from the unity of self-consciousness? Is not this derivation admitted in the admission of Kant's central position? But "each Self," Prof. Seth says, "is a unique existence, which is perfectly *impervious*, if I may so speak, to other selves—impervious in a fashion of which the impenetrability of matter is a faint analogue" (p. 216). So on p. 64: "The real self is one and indivisible, and is unique in each individual. This is the unequivocal testimony of consciousness." Does consciousness testify to anything more than the existence of the subject? All other selves are matter of inference only, 'ejects,' as Clifford called them. The different selves, we are told, "are absolutely and for ever exclusive". Grant that this is a possible hypothesis; but why assert it dogmatically? how can anyone possibly know this? One Ego we know as fact: a plurality of similar Ego's is an inference, a hypothesis to explain the phenomena. So that the "idealist" (or whatever we call him) is at the least explaining the universe by a hypothesis based on the one absolutely certain fact: the "individualist realist" is basing one hypothesis on another.

The idealist argument is not fairly stated as a fallacious inference that, because each self is "I," therefore the "I" is identical in all (p. 64). The argument is the "transcendental proof" whose validity Prof. Seth has already admitted, and which, as he has very clearly pointed out, is nothing difficult or mystical, but only "the time-honoured logical *reductio per impossibile*" (*Scottish Philosophy*, p. 117). The fact of knowledge and that unity of the cosmos which is the necessary condition of any science of nature are only explicable on the assumption of a "Transcendental Ego," which cannot be in time, because it is the condition of time. To explain the relation of this Ego to the various individual human organisms we must have recourse to hypothesis. But *that* this "Universal Ego," or whatever we choose to call it, exists and is the ultimate "Reality" is a necessary inference, because the denial of it involves all our experience in contradiction. Perhaps it was a mistake of Green's to call it a "spiritual principle"; or perhaps we ought to be very careful, as Green himself was, to spell "spiritual" and "eternal" without capital letters. It may be true that "such a principle of unity . . . does not satisfy in any real sense the requirements of Theism"—whatever these may be. Persons proclaiming themselves Theists may so formulate their requirements that no philosophy can or ought to satisfy them. And this consideration may warn us off from some of the hasty applications which have been made of Idealism to defend this or that theological opinion. But if the theological question has to be raised, and it cannot well be avoided, the Idealist may at least claim the same right to use the name of God for the ultimate principle of the universe, which is assumed by every hot-gospeller, who talks about God as

he might do about 'the man in the next street'. Idealism, either of the Neo-Kantian or of Hegel, seems at least to render explicable, in a way in which no other philosophical theory does, why some of the world's greatest minds have held certain theological doctrines, which from the point of view of the logic of "common sense" must appear mere senseless ravings, while at the same time it contains nothing necessarily antagonistic to the most "materialistic" scientific results, provided only these results be sufficiently purged of the unconscious antique metaphysics in which many scientific men are apt to express themselves. This approximation of Idealism and Materialism is made a reproach to the former by Prof. Seth (*e.g.*, pp. 76, 192 n.). But surely a philosophical theory, which can assimilate any results that the sciences using their own methods can attain, and which yet makes the most mystical theology explicable (though not necessarily "true"), has at least the greatest claims in its favour, if it be merely regarded as a hypothesis. Whereas the view of God, nature and man, to which the ontology *apparently* (for we cannot speak with certainty) favoured by Prof. Seth seems to lead, would make it difficult to explain the idea of the creation of the world by God (which is assuredly Thought *making* Nature), and would also make it impossible to assert the omnipotence of God. A consistent application of any theory which assumes a plurality of individual selves "absolutely and for ever exclusive" would allow at the most the belief in a Deity of limited powers. This (if we are to fling about theological nicknames) is a sort of Deism which may not be Pantheistic, but is certainly not Christian. Surely Prof. Seth is not going to label systems 'Pantheism—for external application only,' as if that condemned a system forthwith. He speaks of the Pantheistic tendency in the great mediæval schoolmen (p. 218). Is there not to be found in all the greatest theologians and in all the greatest religious thinkers what seems a Pantheistic tendency to those who are under the sway of the "abstract understanding" and can only think of God as a particular being among other beings?

When Mr. Balfour (quoted by Prof. Seth on p. 24), speaking of Green's metaphysics, says that "we must allow that it is as correct to say that nature makes mind as that mind makes nature; that the World created God as that God created the World" (MIND ix. 80), he *is* (*pace* Prof. Seth) travestying the Neo-Kantian position, because of the ambiguity in the term "makes" and because of the theological connotation imported in the word "creates". As a process in time nature precedes mind and mind is the outcome of nature; yet nature only exists as an intelligible system *for* mind. Prof. Seth himself fully accepts the Aristotelian conception "that the ultimate metaphysical explanation of existence must be sought not so much in a *prius* out of which things emerge as in the goal towards which they move" (p. 82). And so, if the name of God

is dragged in, we can say that, as a matter of history, man when developed out of lower forms of life "created" religion and made gods in his own image, changing his conception of Deity with the growing consciousness of himself, and yet we may hold that nature cannot be explained without that unifying principle, which we may surely call by the term Spinoza used as the equivalent of Substance, but which we consider more adequately expressed by the conception of Self-consciousness. As Prof. Seth himself says (p. 89): "If self-consciousness is the highest fact we know, then we are justified in using the conception of self-consciousness as our best key to the ultimate nature of existence as a whole". And if the theologian insists that God existed *before* the world, we can only remind him that even St. Augustine himself said: "Non est mundus factus in tempore, sed cum tempore".

Apparently the reason of this shrinking from what can be called Pantheism is a fear that the immortality of the soul will thereby become untenable. Certainly the dogma of "absolutely and for ever exclusive individual selves" would carry with it the immortality of these selves *in some sense*, though it would seem to imply pre-existence as well as futurity; so that *personal* immortality is not proved any more than on the "Pantheistic" basis (cp. Teichmüller, *Ueber die Unsterblichkeit der Seele*, pp. 147 ff.). Now Prof. Seth says (p. 228): "I do not think that immortality can be demonstrated by philosophy," and his only argument is the moral one. But does not the possibility of a future life remain equally open to the system here called Pantheistic? (See Green's *Prolegomena to Ethics*, § 185.) We have no right to assert dogmatically that individual selves are necessarily eternal, but neither can we dogmatically deny that all or some of them may persist in some way after the dissolution of this or that bodily organism, though we may feel bound to assert that individual existence is only intelligible to us in connexion with some sort of organism and in a society of similar individuals.

On the subject of free-will it is said (pp. 217, 218): "I have a centre of my own—a will of my own—which no one shares with me or can share—a centre which I maintain even in my dealings with God Himself," &c. Does not this "dangerously resemble some of the cruder dicta" of Libertarians? and, if we again lapse into theology, does it not savour of the Pelagian and the Arminian heresies?

With regard to the main contention of the whole book, that Thought and Reality are distinct, we think a fair answer may be given on behalf either of Hegel or of Green. "Nature is really," says Green (quoted on p. 77), "or for the eternal thinking subject, for God, what it is for our reason." Prof. Seth seems to deny this. "A full statement of all the thought-relations that constitute *our* knowledge of the thing" (the italics are not Prof. Seth's) would certainly not be "equivalent to the existent thing itself" (p. 126). But it may very well be held that a *complete* knowledge

of anything in the whole infinity of its relations would mean the making of that thing. Can we really think omniscience apart from omnipotence? If I knew another individual person through and through, I should *be* that person; but 'What heart knows another? Ah! who knows his own?' And just because we do not fully *know* our own selves, we never fully *are* our own selves. Complete knowledge of anything is to us only an ideal that we can never attain; but so far as we approximate to it, is it not admitted that 'knowledge is power'? The difficulty raised by a small child: 'How does God know that ginger pudding is hot when He has never tasted it?' could only be met by a recognition that the "reality" of the feeling of pungency is not the feeling as such but the conception of it in relation to the rest of the universe. The scientific man may thus be truly said to be "thinking the thoughts of God after Him".

With regard to Hegel, Prof. Seth has done most important service in pointing out that Hegel has created a justifiable prejudice against his philosophy by his method of exposition. He requires to be read backwards. "The order of exposition always reverses the real order of thought by which the results were arrived at" (p. 95). Hegel's great merit lies in his appreciation of historical evolution. Is it not his great mistake to have assimilated his exposition of a thought-process to the exposition of a time-process? As to the details of his philosophy of nature, Hegel's warmest admirers might sometimes wish we were well rid of them. Perhaps it is best to leave nature to the scientific men. Unless they are possessed by some very obstinate metaphysics, which Hegel's name would hardly conjure out of them, they may be trusted of themselves to turn nature into a system of thought-relations. Here is Prof. Karl Pearson, after many hard words about Kant and Hegel, in a lecture entitled "Matter and Soul" (*The Ethic of Freethought*, p. 74), coming to the conclusion that "the laws of the physical universe follow the logical processes of the human mind". Here is Prof. Huxley, in the *Nineteenth Century* for February of this year, admitting that the course of nature may be described as "a materialised logical process". Of course the mere specialist might not say anything like this, but the mere specialist is not the person we have here to reckon with.

That particular stumbling-block, "the Contingent," must be regarded as a survival in Hegel of the Platonic and Aristotelian conception of Matter. Hegel is really false to Idealism in allowing that anything in Nature is irrational: he was probably carried into exaggeration by the wish to protest against the false fashion of exalting Nature in contrast with Man. Prof. Seth strangely agrees in this view of nature, though he regards it as an inconsistency in Hegel. "What logical connexion," he asks, "is there between the different qualities of things—between the smell of a rose, for example, and its shape; or between the taste

of an orange and its colour?" (Pp. 133, 134.) Well, we do not know; but need we despair of finding out? The smell and shape of the rose must both have some connexion with its attractiveness to particular insects, and, therefore, are connected with one another in some way. Cats and red clover abounding in proximity might seem to be very disconnected phenomena; but Darwin found a connexion between them. It is as well to be modest about what we do know, but not to give up hard problems too hastily. In his view of Nature, Hegel errs in both respects.

With the protest against Hegel's claims to finality (pp. 187, 196, 207, 213) we feel most complete sympathy. But is he not here also false to the spirit of his own philosophy in the attempt to satisfy the promise of the term 'Absolute'? The principle of dialectic movement, the perpetual self-criticism of thought, cannot be arbitrarily arrested anywhere. The Prussian State of 1820 and the Hegelian synthesis as then expounded must, according to his own principles, be superseded in the fulness of time and taken up into some higher form of themselves. We can, of course, only attempt to read off the meaning of what is already fully written down, but we must not dogmatically assume that no one will ever have anything more to read. Finality has been a temptation to statesmen, theologians and philosophers in all ages, and the most eager initiators are themselves apt to fall into it. "*Der Initiator stirbt, oder er wird abtrünnig,*" says Heine. And Hegel is no exception; for his temperament and surroundings made him conservative.

The famous dictum, "What is rational is real, and what is real is rational" (see pp. 199 ff.), is double-edged; but Hegel himself has been so much occupied looking for the rationality of the existent, that he has been apt to forget the claims of the rational to make itself real. It is, however, just the polemic against Fichte's *Sollen* which we should regard as one of his exaggerations. The distinction between the merely existent and the truly real is no "quibble," but expresses the most important distinction which everyone must seek to discover in practical life. All sorts of institutions and customs assert their reality, though they may be dying or dead—delusions and shams. And the "truly real," the growing and living, may need the prophet to discern it among them, though time alone proves his wisdom. What is dead exists in a sense; but the most important thing about it is that it *was* once real and rational.

In his last page Prof. Seth says: "Nothing can be more unphilosophical than the attempt to crush man's spirit by thrusting upon it the immensities of the material universe". In the light of this sentence it is strange to find Lotze's contemptuous treatment of Hegel's philosophy of history regarded with approval. "Is it not effrontery to narrow down the Spirit of the universe to a series of events upon this planet?" (P. 195; cp. what follows.) If there are a few inscribed stones which we can decipher more or

less, are we to neglect them because there are myriads buried in the sands of the desert? Since it is admitted that self-consciousness is "our best key to the nature of existence as a whole," will not any one great epoch of human history, which we can fairly grasp and comprehend, or any one great human character, teach us more about the "Spirit of the universe" than a wilderness of stars, respecting which we know nothing save a few scraps gathered by spectrum-analysis?

To conclude: those who find themselves compelled to disagree with many of Prof. Seth's views may the most readily testify to the value and suggestiveness of every page. As we understand that Prof. Seth's next enterprise will be to expound and criticise the Individualists and Realists from Leibniz to Lotze, we have some hope that it may then be the turn of Hegel and the Neo-Kantians to receive rehabilitation.

D. G. RITCHIE.

The Nervous System and the Mind: A Treatise on the Dynamics of the Human Organism. By CHARLES MERCIER, M.B. London: Macmillan & Co., 1888. Pp. xi., 374.

Mr. Mercier's book is very accurately described as a "Treatise on the Dynamics of the Human Organism"; the common feature of the three parts into which it is divided being the consideration of the facts of nervous function under their aspect as movement. "The Nervous System" is dealt with in part i. (cc. 1-6, pp. 17-145), "Mind" in part iii. (cc. 9-14, pp. 207-363). The intermediate part (cc. 7, 8, "The Functions of the Nervous System") deals with "Conduct" and its "Nervous Mechanism". An Introduction and Conclusion set forth general principles and results. Part i. gives a view of the nervous system, combining Mr. Spencer's theory of the origin of nerves with the theory of Dr. Hughlings Jackson (to whom the book is dedicated) as to the structure of the nervous system as a whole. Part ii. is an attempt at a purely "objective" theory of the various kinds of "intelligence" as manifested in "conduct," that is, in adjustments of physiological relations to relations in the environment. Part iii. is concerned with the classification of psychological phenomena, now viewed as "mental states" and no longer under their purely objective aspect, but still compared with one another simply as regards their objective conditions. With this part are incorporated the author's contribution to MIND No. 30, on "The Classification of Cognitions," and his series of articles on "The Classification of the Feelings," in Nos. 35-7. The chapter on Cognition (c. 10), to the previous appearance of which, though not of the chapters on Feeling, he makes reference (p. 237), is much modified from its original form. The articles on the Classification of the Feelings (incorporated as cc. 12-14) appear almost without modification. The

remaining chapters of this part (cc. 9, 11) are on "The Constitution of Mind" and on "Feeling". All his psychology the author regards as a construction according to Spencerian principles, though not always in agreement with Mr. Spencer's particular conclusions.

The present work is intended, Mr. Mercier tells us, to prepare the way, by a statement of the laws of the normal mind in relation to physiological conditions, for a more satisfactory "science of Alienism" than yet exists. Alienists have hitherto disregarded "the study of the normal mind". The main reason of this neglect has been that "the classical works on Mind ignore altogether its association with body, and study it from a standpoint so purely introspective as to offer no obvious advantage to the alienist, to whom the concomitant disorders of body are so conspicuous and so important". No "appreciable advance in the science of insanity" can be made until a statement of psychological doctrines has been prepared "in which the phenomena of mind are associated with the phenomena of nervous action and of conduct". Such a statement it has been the author's aim to supply. At the same time, "new principles and new aspects of old principles have come into view, which will," he trusts, "render the statement of them not only important to the alienist, but interesting also to the general student of psychology".

It is probably "the general student of psychology," and not the alienist, who will find the book most interesting. The physiological conditions of mental phenomena are, no doubt, of special importance to "the student of insanity"; and study of the normal phenomena of mind ought, of course, to be preliminary to the study of abnormal phenomena. The particular way of study that Mr. Mercier has chosen, however, does not seem very well fitted to lead up to the abnormal phenomena that constitute insanity. In the most distinctly psychological part of the book he treats especially of those nameable cognitions and feelings which, in the normal mind, accompany differences of adjustment of relations in the organism to relations in the environment. Insanity, then, has to be defined in terms of this "correspondence". It is found to consist essentially in "non-adjustment of the mental relation to the relation in the environment". When the establishment of the mental relation is the process that is primarily in error, and when this process can be rectified if the objective conditions are present, there is only "mistake"; when the process of adjusting the mental relation to the environmental relation with which it corresponds is at fault, there is "insanity" (pp. 247-51). In treating intelligence from a still more "objective" point of view, as a character simply of "conduct," that is, of certain combinations of movements that correspond to movements in the environment, Mr. Mercier arrives at the conclusion that insanity is essentially a disorder of the form of intelligence manifested as "conservation by adjustment" or "skill in con-

serving the organism" (p. 186). To both these definitions the objection presents itself that no account is taken of derangement of the "feeling of personality," which is probably the accompaniment of a derangement of internal physiological relations rather than of any definable failure of adjustment to external relations. If from the psychological point of view this is the central phenomenon of insanity, then the objection is not so much to Mr. Mercier's particular definitions as to his whole method so far as it is put forward as of special value to the alienist.

The passages on alienism, however, are in reality only incidental. To be appreciated at its true value the book must be regarded as a theoretical rather than as a practical book. Its three parts, also, must be viewed to a great extent in independence; for in each successive part a new class of considerations is introduced.

Part i. is divided into a "physical" and a "physiological" section. In the first section the changes in nerve-cells and fibres that produce single muscular actions are treated of; in the second, the combinations of the "actions" of single muscles into the "movements" of groups of muscles. The reasons for calling the first branch of the subject "physics" are that, in considering the processes that go on in all cells and fibres, the laws of redistribution of energy, or, as the author usually expresses it, "redistribution of force," in the nervous system, are arrived at, and that the redistribution of force is a "physical function". A very clear account is given of the laws of neural discharge and muscular contraction as experimentally ascertained. Before this comes an "inferential" account of what takes place in the nerve-cells and fibres when in the living organism. The nerve-cell is regarded as essentially an expansion of a nerve-fibre; its function being to increase the force of the impulses it receives. The nervous discharge, in the author's view, not only passes from cell to cell through fibres, but permeates the matrix of the grey matter also. There is no strictly spontaneous discharge. Every discharge in a cell can be traced to some external cause, some "redistribution of force" outside that cell, and ultimately to the action of the environment on the organism. Essentially it consists in a process of "decompounding" of molecules, by which they change their internal structure without decomposition into separate molecules. Nervous tracts oppose different amounts of resistance to the nervous discharge. When a nervous tract is not completely permeable, a portion of the force of every new discharge that passes is used up in making it more permeable. "When the permeability reaches its maximum, the discharge that emerges is actually greater than that which enters, owing to the accession that it receives from the decompounding of the molecules." The first origin of definite nervous channels is to be found in the tendency of molecules along which a discharge has once passed so to rearrange themselves as to allow a greater

current to pass. In the formed nervous system there is a constant "redistribution of force" resembling the "redistribution of matter" that takes place in the circulation of the blood. "Along every nerve-fibre gushes of force continually succeed one another, as waves of blood pass through the arteries. Every nerve-cell is, as it were, a heart, which receives the current flowing into it, and discharges it with increased impetus. Every tract of matrix is comparable with the intercapillary tissue. . . . As through the intercapillary tissue new capillaries are formed by protrusions from the old, so in the matrix of the grey matter new fibres are formed by protrusions from the old" (pp. 45-6).

This account of the "physics" of the nervous system is, as the author frequently takes occasion to acknowledge, based on Mr. Herbert Spencer's theory of the origin of nerves and nervous systems. The "physiological" theory that follows it is similarly based on Dr. Hughlings Jackson's theory of a "hierarchy" of nervous centres, each "representing" and co-ordinating the movements co-ordinated and "represented" by the centres below it; till at length, in the lowest grade, the cells are reached that start the simple "actions" already discussed. These "actions," according to the author's terminology, are first co-ordinated into "movements" of limbs, movements into "acts" of the whole body, and acts finally into "conduct". He seeks to explain the process of co-ordination by assuming fibres of different calibre running in different directions from the same co-ordinating cell; the calibre determining the amount of the current of "force" when the "discharge" is constant, just as the calibre of a pipe determines the amount of the current of water from a cistern (p. 70). The various modes of combination of muscular movements are systematically classified; and an explanation of each kind of combination is sought in the ordering of nerve-centres. An elaborate parallel is drawn between the organisation of an army and the organism of the nerve-centres that preside over the various groupings of muscular actions (pp. 133-143). Acceleration and inhibition, it has already been urged, are effected by the same centres (p. 79). As to their nature, "it seems reasonable to suppose that, just as the physical process of the nervous discharge, when viewed in the aggregate as a physiological process, is the motor of muscular movement; so the nervous resistance when raised to the same power is the physiological factor inhibition" (p. 80).

The definite transition from Physiology to Psychology is made at the beginning of Part ii., where "we leave the consideration of actions carried on entirely within the body and enter on the consideration of the way in which actions of the body itself are adapted to the circumstances existing outside of it". "The physiological and the psychological functions of the nervous system" are defined as being, the first "to adjust the internal processes of the organism to one another," the second "to adjust the organism as a whole to its environment". The processes in the organism that

psychology (in this sense) considers are not properly mind, but "the substratum of mind". This psychology is Mr. Spencer's "objective psychology". It is "psychology" and not physiology, because "the environment" is in question. It is "objective" psychology, because it considers "conduct" or the ordering of movements, entirely apart from introspection. The main result of this second part is to establish "four different standards or scales or criteria according to which intelligence is estimated": *viz.*, (1) Novelty of Adjustment, (2) Elaborateness of Adjustment, (3) Precision of Adjustment (= "Skill"), (4) Conservation by Adjustment (= "Common-Sense"). "Genius," "folly," "stupidity," "cleverness," "shrewdness," "unthriftiness," are defined according to the ratios of the different powers of making adjustments. The explanation of the establishment of new adjustments of the "Nervous Mechanism of Conduct" is found in the "strictly physiological law," that "successful acts tend to be repeated," and "unsuccessful acts tend to be suppressed".

Without questioning the validity of Mr. Mercier's distinction between physiology and psychology, we may still find reason for thinking that his whole treatment of "Conduct" is more than "objectively" psychological. Mr. Mercier's psychology, both here and in the next part, is undoubtedly psychology with a minimum of introspection; but the introspection is still present. The characters described as belonging to the various kinds of "adjustment" would be unintelligible without implicit reference to introspective distinctions. Take, for example, a sentence from the description of "intelligence as manifested in the novelty of the adjustment". "The witty man is the man who looks at things in new and unusual lights, who brings together ideas that have never been coupled before, and, other things being equal, he is more witty the more incongruous the ideas he brings together, that is, the more widely they have hitherto been separated—the more unlike his adjustment to previous adjustments" (p. 163). What is the meaning of looking at things in "new and unusual lights," of "ideas that have never been coupled before," of incongruity of ideas, apart from subjective reference? The mere word *idea* is enough to show that we have gone beyond purely objective considerations. Nor is this an accidental case. Critical examination of the treatment of "conduct" throughout would show that "adjustment" is only a single aspect of processes that could not be discriminated at all except by means of distinctions that are the result of introspection. The limitation of the objective point of view is made manifest also by the fact that the elaborate physiological classifications and theories of the previous part contribute almost nothing to the definition of the various kinds of intelligence.

That an abrupt transition is necessary when we pass to subjective considerations Mr. Mercier recognises as clearly as anyone. He speaks, for example, of "the impassable gulf, the fathomless abyss, that separates the world of consciousness from

the world of material things" (p. 9); and nothing could be more absolute than his statement of the parallelism, without break on either side, of the series of physical and mental events. He also admits fully the hypothetical character of much of the accepted physiology of the nervous system; and he recognises that, in any case, to speak of processes in the nervous system as "the substratum of mind," can only be defended on grounds of scientific convenience, and not as a philosophical statement of the relation of mind and matter. The criticism to be made on his mode of treatment of "conduct," therefore, is not that it involves any theoretical error as to the province of "objective psychology," but that, in defining the complex kinds of conduct to which he attempts to apply it, he is compelled to introduce subjective considerations while professedly dealing only with movements, in complete abstraction from "thoughts and feelings".

As almost the whole of the third part has appeared in the form of articles in MIND, and as it has been already criticised from the psychological point of view, at length by Mr. Carveth Read, and incidentally by Mr. H. M. Stanley, in No. 41, it is unnecessary to say much of it here. One characteristic of Mr. Mercier's mode of classification may, however, be noted as not peculiar to his psychology. In all his classifications he seeks to show that the things classified, whether feelings or movements or groups of cells, fall into an "arboreal" arrangement. This arrangement, he points out, is the normal arrangement assumed by products of evolution. Hence, he seems to infer, the arboreal classification is evolutionary. Yet, as both Mr. Mercier's critics in MIND No.41 have shown, his psychological classification is not really evolutionary, in so far as he makes no direct use of genetic considerations. What he seems to have in view is really a Natural History classification, which he calls "evolutionary," because the objects of Natural History, and all objects that can be similarly distributed, may be presumed from the mere fact of this arrangement to have been evolved. The question then is, whether the Natural History method of classification can rightly be applied to Cognitions and Feelings. This is a question that must be decided, in the last resort, by introspective psychology.

THOMAS WHITTAKER.

The Logic of Chance: An Essay on the Foundations and Province of the Theory of Probability, with especial reference to its Logical Bearings and its Application to Moral and Social Sciences and to Statistics. By JOHN VENN, Sc.D., F.R.S., Fellow and Lecturer in the Moral Sciences, Gonville and Caius College, Cambridge, &c. Third Edition, re-written and enlarged. London: Macmillan & Co., 1888. Pp. xxix., 508.

Everyone interested in the subject of Probability must be familiar with Dr. Venn's valuable essay on the Logic of Chance.

The third edition, which has just been published, differs chiefly from the second in containing a more detailed examination of mathematical questions, connected with the conception of Randomness, with the use of Averages, and with different Laws of Error. The new matter is, therefore, specially technical. In the notice which follows more particular mention will be made of what is new, but it is impossible to treat this alone without taking into review the essay as a whole.

The standpoint from which the author treats the subject is that called the Material or Objective. According to this view, Probability is wholly concerned with the numerical characteristics of certain series which are presented to us. A succession of complex objects comes before our notice. Some constituents of these complex objects are present in every member of the series: others are present in some but not all. Hence it obviously follows that the ratio of the number of members which have any given constituent to the whole number of members that have come to our notice must finally have some definite value. This is a mere arithmetical necessity. There are, however, two peculiar characteristics which make the series a Probability-series. (1) In each individual member of the series the constituent under consideration is present or absent according to no ascertainable law. (2) The ratio of the number of already observed cases of the presence of the given constituent to the whole number of already observed cases tends with continually increasing steadiness towards its final value. An important distinction is made between those "artificial series" (such as in games of chance) in which the limit of the ratio is permanent, and those "natural series" (such as in biological or moral statistics) in which the limit of the ratio is itself fluctuating or developing towards another limit. So far the occasional constituent is regarded merely qualitatively. But, of course, the important mathematical applications of Probability are concerned with quantitative constituents. In these cases we obtain, by observation or otherwise, Laws of Error—*i.e.*, algebraical equations connecting the magnitude of the constituent with its comparative frequency. One of the most interesting of the subjects newly dealt with in this third edition is the consideration of other laws of error, besides the one usually discussed, which is obtained on the assumption that the causes of variation which are equally frequent are those which produce equal *differences* of magnitude in the constituent under consideration. As had been pointed out in the earlier editions, it would be remarkable if, in the various classes of probability-series, experience should present us always with the same law of frequency. For these series include such different classes as (1) games of chance, (2) exact measurements of different natural objects, and (3) inexact aims, measurements or estimates of one and the same object. In this third edition Laws of Frequency other than the ordinary law are noticed as

having been actually observed, and as being up to a certain point deducible *a priori*. Thus allusion is made to Mr. Galton's suggestion—"Suppose we endeavour to match a tint; Fechner's law . . . sensation = log. stimulus, tells us that a series of tints, in which the quantities of white scattered on a black ground are as 1, 2, 4, 8, 16, &c., will appear to the eye to be separated by equal intervals of tint. Therefore, in matching a grey that contains 8 portions of white, we are just as likely to err by selecting one that has 16 portions as one that has 4 portions." It is somewhat misleading to adduce this conclusion as a deduction from Fechner's law, since Fechner's law in reality is itself a very precarious deduction from experiments which establish just this fact —that false estimates are equally frequent which bear an equal ratio to the true measure. The inference from this to Fechner's law is precarious, for upon what assumption does it proceed? In the first place it is clear that the estimates are formed by comparison of *sensations*. What Fechner assumes, then, is that false estimates of a sensation are equally likely which are equally *different* from the true measure of the sensation. Under this assumption it follows that stimuli 4, 8, 16 (*i.e.*, 2^2, 2^3, 2^4) produce sensations proportional to the indices 2, 3, 4 (*i.e.*, $\log_2 4$, $\log_2 8$, $\log_2 16$) respectively. For since it is assumed that sensation 3 is equally likely to be equated to sensation 2 as to sensation 4, this would account for the observed fact that stimulus 8 is equally often matched with stimulus 4 as with stimulus 16. Whatever then may be the *causes* of the false estimates we make of our sensations, the assumption underlying Fechner's logarithmic formula is that these causes act in accordance with the ordinary law of the arithmetical mean—*viz.*, that those causes of variation in our estimates of sensation are equally frequent which produce estimates equally different from the most frequent (*i.e.*, the true) estimate. It is, therefore, impossible to adopt Fechner's formula and at the same time to suppose that psychical phenomena are compounded according to a different law from physical.[1]

Since in cases of estimates variations are equally likely which bear an equal ratio to the most frequent value, therefore errors in excess of this most frequent value are less frequent than errors of equal defect from it. Hence the curve of frequency is lopsided. Dr. Venn suggests (p. 35) that this "want of symmetry ought to be looked for in all cases in which the phenomena under measurement are of a 'one-sided' character, in the sense that they are measured on one side of a certain fixed point from which their possibility is supposed to start". It certainly seems obvious

[1] The objection may be made that Fechner's law is supported by what Wundt calls the Method of Mean Gradations, as indicated in the quotation from Mr. Galton. But this method applies in the main only to equal intervals of tint and of pitch; and an examination of consciousness gives no intimation that these equal intervals are equal *differences* rather than equal *ratios* of sensation.

that the ordinary exponential law, which assumes that positive and negative infinity are the limits of possible variation, must necessarily fail to express such "one-ended phenomena". In fact, might we not generalise still further? For, in dealing with the errors of estimates in which the geometrical mean is adopted, we obtain our results by treating the logarithms of the estimates instead of the estimates themselves, and combine these logarithms according to the principle of the arithmetical mean. Similarly in any other case should we not employ such a function of the measures under consideration as will give + and − infinity for the limiting values, and then treat this function by the ordinary arithmetical mean? Of course this rule alone does not determine what the function should be. But in any case where we know to what function of the measure of the cause the measure of the effect is proportional, we have our required function at hand.

A special chapter (v.) is devoted in this edition to a consideration of the conception of Randomness. It is maintained (p. 100) that "we always encounter, under this conception of Randomness, at some stage or other, the postulate of ultimate uniformity of distribution over some assigned magnitude—either time or space, linear, superficial or solid". The arbitrariness involved in selecting the stage of uniformity of distribution is well pointed out. Further, it is shown that the solution of any problem such as those in which mathematicians indulge requires us to assume that the area of distribution is finite. Many interesting mathematical problems are commented upon; but it is impossible to discuss them here. The most important question that is discussed in this chapter is the means of determining whether an arrangement is to be considered a "random" arrangement or not. It is pointed out that if the succession offered is small, the question of its randomness is unanswerable. The interesting point that the digits in incommensurable numbers present all the characteristics of Randomness is brought forward, and a method is suggested of graphically representing this Randomness by lines drawn in directions corresponding to the successive digits, and the result in the case of π is given in a diagram. Why this randomness should arise is recognised as "a rather puzzling question". It is suggested that the values of incommensurables which represent abstract geometrical or arithmetical relations may be expected to present a random succession of digits, just as would the successive approximations to the ratio between two lines chosen at random. But this hardly seems to meet the difficulty, since the relation in question is *not* a random ratio; and the student who arrives at such a ratio by a purely abstract piece of reasoning may feel astonishment that no law is discoverable in the final order of digits. It may, perhaps, be suggested that since our radix of notation must be arbitrarily chosen, and since a value such as π or e can have no preference for one integer over another, the "uniformity of distribution" in the final issue is explicable. If, for instance, we chose the reciprocals of the factorials 1, 1·2, 1·2·3, &c. (instead of

successive negative powers of 10) by which to express fractions, the value of *e* would be expressed in the simple form—*unity recurring.*

The conception of Randomness is allied to that of Chance as contrasted with Causation and Design. A chapter (x.) is devoted to this subject, containing much new matter, the discussion of which conveniently follows here.

The associations connected with the word Chance are somewhat different from those connected with the word Probability. Briefly, we are in general concerned with the *evaluation* of Probability but with the *elimination* of Chance. The exact force of the word 'casual' must be determined in any treatment of chance. On p. 245 Dr. Venn thus defines it: "We call a coincidence casual, I apprehend, when we mean to imply that no knowledge of one of the two elements, which we can suppose to be practically attainable, would enable us to expect the other". The implication here is that if we *could* attain such knowledge we *should* be enabled to expect the one from the other. But this supposition is immediately refuted by a single experience in which the one element is not accompanied by the other. Of course it may be replied that there must have been accompanying conditions, the presence of which accounted for the coincidence in the one case and the absence of which accounted for the non-coincidence in the other. But this only shifts the casualty one step backwards; in some cases the conditions are present, in others they are absent. The real meaning of the term 'casual' seems to me to be this. When experience has informed us of the truth of a particular proposition—Some S is P—and of its sub-contrary—Some S is not-P—then we say in any particular case 'The coincidence of S with P is *casual*'. But this casualty is not merely subjective; it indicates an ultimately objective casualty. For if we attempt to explain why these S's are P and those S's are not P, we can only bring forward the fact that 'These S's are X' (and *all* X's are P) while 'Those S's are not-X' (and *no* not-X's are P). Hence we are forced to accept sooner or later an ultimate casualty in the nature of things. So far from this being, as Dr. Venn implies, contrary to the spirit of "modern physical notions," it is implied in every resolution of a complex sequence into its constituent sequences. When we *explain* the sequence of PQ upon AB by referring P to the antecedent A and Q to the antecedent B, we at the same time imply that P and B are *not* causally related, *i.e.*, that they are casually related. Of course we may proceed to determine under what conditions P is accompanied by Q (and therefore by B), but there will remain the fact that P is sometimes, but not always, accompanied by these conditions. Following Mill, it would seem that the only uniformity which Science *postulates* is a uniformity of sequence. Uniformities of Simultaneity are only accepted by resolving them into Uniformity of Sequence *plus* an originally casual distribution.

It seems that only in this way can we rest satisfied with the experience we have of those "*series*" which Dr. Venn regards as

forming the basis of Probability. He writes (p. 60): "Broadly speaking, it appears to me that the most suitable conditions for Probability are these: that the important causes should be by comparison fixed and permanent, and that the remaining ones should on the average continue to act as often in one direction as the other". Now, can the scientific spirit be satisfied with the view that a cause acts sometimes in one way and sometimes in another, or (if this is not precisely what is meant) that a cause is sometimes present and sometimes absent? Why is it sometimes present and sometimes absent? Surely we must somehow get an explanation of this seeming casualty or lawlessness. The explanation seems to me to be as follows. We must remember that we are restricting our view to a particular class of things, or, as we may say (partly metaphorically), to a particular point in space. The agencies which are brought to bear upon this point of space must be really *permanent existences.* They do not come in and out of being, but they do come in and out of the given point to which our attention is restricted. How is it that their entrance into this point is irregular, lawless, casual? The answer can only be: Because their original disposition in space was irregular, lawless, casual. How is it that in many cases this "individual irregularity develops into aggregate regularity," as Dr. Venn epigrammatically expresses it? The answer is: That the agencies which are brought to bear are themselves permanent, and therefore their number and magnitude are fixed. Finally, how is it that the "limit towards which the average tends" in itself fluctuates in all cases where Development operates? The answer is: In such cases there are continually new agencies being brought to bear upon the given point. The relation between the casual and the causal in Dr. Venn's view is indicated in the following passages (p. 212): "If, the circumstances under which men live and die remaining the same, we did not feel warranted in inferring that four men out of ten would live to fifty, because in the case of those whom we had observed this proportion had hitherto done so, it is clear that we should be admitting that the same antecedents need not be followed by the same consequents. This uniformity being what the Law of Causation asserts, the truth of the law is clearly necessary to enable us to obtain our generalisations. . . . Provided only that the truth of our generalisations is secured to us, in the way just mentioned, what does it matter to us whether or not the individual members are subject to causation?" And again (p. 239): "Is this assumption of average regularity in the aggregate inconsistent with the admission of what may be termed causeless irregularity in the details?" This last passage occurs in discussing the bearing of Statistical Uniformity on the question of the Freedom of the Will. I find myself quite unable to accept this point of view. To discuss the matter fully we must examine a little more carefully what is meant by "average regularity in the aggregate". To put it in the most general way, let us suppose that of the S's,

which have come before our notice, some, but not all, are P's. It is obvious that there must be some numerically definite fraction of the whole number of presented S's, which are P's. This ratio may vary from 0 up to 1. Suppose, then, that its value is p. So far there is nothing specifically to be noticed about our experience, since it is simply such as may be *a priori* anticipated. But now introduce the specific character which Dr. Venn expounds so clearly. Looking back upon the S's and observing how they were successively presented to our notice, we find that, as our experience has extended, the ratio of the already observed P's to the whole of the already observed S's has in the main been advancing steadily nearer and nearer towards the finally observed ratio p. Now of course this might have been otherwise. It might have been that all the P's were presented to us first, and then all the not-P's. There is no merely formal or *a priori* reason why the final ratio should have been gradually approximated to. For instance, of words in a language there must be a finally definite portion which are nouns, and another finally definite portion which begin with a given letter. If we come across these words in a dictionary, the series of nouns which are presented to us will have the serial character of approximation to the final limit, but the words beginning with a given letter will all occur together. In a grammar the results will be reversed. But what is the particular inference to be drawn from this "gradual approximation towards a limiting value in the succession of objects presented to our notice"? In the first place it is implied, of course, that we cannot trace any *order* in the series presented. The phases of the moon go through continually repeated periods; but this is not the case with our supposed series. Hence the nature of our experience prevents our looking to the earlier members of the series in order to discover the conditions of the characteristics of the later members. Our conclusion, therefore, is that the conditions of the characteristics of the series are *outside* the series. In other words, the members of the series are taken successively out of *different* chains of causation. The conclusion follows, then, that the several chains of causation permanently co-exist with one another, and that the different chains were originally (and therefore remain permanently) connected in a perfectly arbitrary, lawless or casual way. Now let us apply this to the statistics of human conduct. We observe that 250 people in London annually commit suicide. I admit that this taken by itself would not create a doubt of the Freedom of the Will, supposing a belief in it existed. But it is the use which persons would make of the discovery that would involve a disbelief in Freedom, *i.e.*, Indeterminism. For should we not infer that the general circumstances of those who lived in London during the observed period were roughly constant, and that as long as they remained the same the ratio of suicides would continue? And how would this reasoning be possible unless we assumed that these circumstances were operative in determining

conduct? Dr. Venn admits that the extension of the observed *aggregate* regularity requires the postulate of causation. But I cannot see how causes can produce *collective* effects, unless each produces its own individual effect.

In the same chapter x., a discussion is raised as to the attempt to decide whether so called Chance or Design has produced a given observed phenomenon. If we confine ourselves to Human Design the question is at least intelligible: but, as the author indicates, if Divine purpose is brought into the balance, we get "beyond the limits of what is intelligible". He applies the discussion (p. 251) to the question raised by Prof. Piazzi Smyth, who, having taken measurements of the great pyramid of Ghizeh, observed that the proportions and lengths presented several natural standards. In particular, the ratio of the sides to the height was found to be that of the circumference to the diameter of a circle. The meaning of the question whether this was due to Chance or Design is here clear enough. We assume that the ratio was decided by purposive human action. In considering the result observed to be due to Chance, we mean that the aim was the ordinary architectural aim of producing a convenient or beautiful structure. In considering the result as due to Design, we mean that the aim was to represent a particular geometrical ratio. So understood, the problem is easily solved theoretically. Amongst all the possible ratios, producible with *architectural* objects, we can assign the probability of the ratio falling between any assignable limits. On the other side, we have to multiply the probability that *some* geometrical ratio should have been aimed at by the probability that the particular ratio π should have been chosen out of all such ratios as could have been probably ascertainable. Of course the "conventional estimate," as Dr. Venn calls it, of π is here taken into account. The next question discussed is as to the balance of chance against causal elements in such investigations as those of the Society for Psychical Research into thought-transference. It becomes necessary to make perfectly clear what here is meant by the alternative called chance-agency. "Out of 1833 guesses as to the suit of cards, 510 were found correct, the chance-number being 458. The odds against this under mere chance-agency are calculable as about 332 to 1." Now 'chance' here means that the causes which determined what suit the agent should fix on were quite independent of the causes which determined what suit the percipient should fix upon. The two series or chains of causation were existing side by side without any interaction with one another. This seems to me to be real objective casualty. If the suits fixed upon are identical in any case, we say that the coincidence is *wholly* casual. But even if thought-transference is a *vera causa*, the coincidences would be casual: we could not predict with certainty that the suits fixed upon would coincide in any particular case. The question resolves itself, therefore, into this: Where two persons sit together (or are related to one

another in some manner favourable to the transference of thought) will there, in the long run, be a greater number of coincidences than under circumstances in which thought-transference is excluded? Here thought-transference is contemplated as an agent only *occasionally* efficient, being merely a tendency which 'chance' causes may counteract. The solution of the problem seems to me to imply throughout the objectification of Chance: that is, real causal independence between different agents.

The last two chapters are devoted to the nature, use and general theory of Averages. These are in the main new: the results being worked out with greater mathematical detail than in the former editions. The exact mathematical definition of an Average is not given, though its insertion would seem desirable in any general discussion. I presume that an average of a number of quantities is simply any symmetrical function of them which, if they were all equal, would be equal to each. The author gives the reason why sometimes an arithmetical and sometimes a geometrical average is clearly appropriate. Taking the most general conception of an average as above defined, we should take that average which would give us "the same final result whether we took account of the actual divergences or suppose all the quantities equated to their average". Whatever be the mode of compounding measures in nature, that must determine the mode of calculating the appropriate average. Dr. Venn's examples are, (1) "the average price of sheep is 50 shillings," "if it would come to the same thing if they were sold at different prices, or are all sold at this average price". Here it is clear that, from the point of view of the seller, the price of one sheep is added to the price of another, the result being a sum of money in his pocket. But (2) suppose a population increases throughout 100 years from 10 million to 20 million, we may say that the average population during the period is 15 million, but since no conceivably useful result would follow from our *adding* the population of one year to that of another, no use could be made of such an average. If, instead, we observe that the *ratio* of increase during the 100 years is 2 : 1, we should appropriately regard $\sqrt[100]{2}$ as the average yearly increase, because if this is substituted every year for the actual increment, the final result is the same. Two other middle values are then expounded, *viz.*, the '*maximum ordinate*' or '*dichteste Werth*' and the '*median*'. These are found, we may say, numerically, but not quantitatively. They are not averages in the sense of mathematical functions of quantities. They are determined simply by arranging in order of magnitude and then counting. The maximum ordinate method is simply the substitution of the most frequent, and therefore really the most probable, of the values in question. The 'median' is shortly defined as the 'middle value' when all are arranged in order of magnitude. It is pointed out that the (arithmetical) mean, the '*dichteste Werth*' and the median *coincide* in the ordinary Law of Error; *i.e.*, when we take the variable

magnitudes themselves. But when we take the so-called *errors* of these magnitudes, the 'most frequent error' is zero, and the 'median error' and '(arithmetical) mean error' do not coincide, if (as of course is always done) we neglect the signs of these errors; and the square root of the arithmetical mean of the squares of the errors (or error of mean square) of course gives a third mean. If any other than the ordinary Law of Error is assumed, it is shown clearly by an example that these several means may give different results. The author has taken 4857 barometric observations, in which the results are—mean = 29·98, median = 30·01, and most frequent height = 30·05.

The use of taking an average, and the general ground for adopting the arithmetical mean, are shown (1) in the case of several measurements of one and the same natural object. Here it is shown that 'error' is used in its real appropriate sense. Once grant "the equal prevalence of equal and opposite errors" and we see the use and justification of the arithmetical mean. But (2) in the case of measurements of variable natural objects we are told "the constancy of the average *is* its truth". But the use of finding the average in such cases is surely to assign as nearly as possible the magnitude of the effect due to some cause which we know to be *constant* throughout all the observed cases. So that here, too, it would appear to be true that the only *use* of the average is to ascertain the measure of some objectively constant effect. This leads to the distinction which is often made between 'average' and 'mean'—a distinction which Dr. Venn repudiates. However, might we not distinguish between those cases in which we are really aiming at measuring the effect due to the presence of some one constant cause from those cases in which we can simply say that a certain magnitude of effect is the most frequent? As Dr. Venn remarks (p. 455), the most frequently produced magnitude of effect may not at all coincide with the value found by taking the arithmetical mean of the effects.

An extremely important discussion is here (p. 457) raised as to "what is necessary and what is matter of experience" "in this continually intensifying uniformity" which is observed in the long run. It is pointed out that, *e.g.*, though the averages of 10 digits must in accordance with arithmetical laws differ less (or strictly cannot differ more) than the single digits, yet we must certainly wait for experience (p. 458) to inform us of the regularity with which the different averages of 10 digits will occur. Further suggestive comments are made on the 'average' which we cannot here discuss: and the chapter closes with two useful hints to the elementary mathematician in dealing practically with the exponential Law of Error.

The last chapter contains a large number of useful remarks on the "logical principles underlying the methods and processes" of taking averages. First (p. 468) the confusion is cleared up between the Law of Error, which is "of the nature of a physical fact," and the Method of Least Squares, which is "a rule for

our guidance," "when any number of errors are presented to us". Since the use of this method is in solving an 'Inverse Problem,' it is first necessary to investigate the 'Direct Problem' founded on the Law of Error. By the 'direct problem' is meant the effect of taking averages when the central value and law of dispersion have been ascertained with supposed certainty. But the order of treatment is rather confusing, because the preliminary question of *how* these are ascertained with certainty is first entered into at length. (1) To ascertain the central value: this is known *independently of specific experience* in the case of artificial combinations and in the case of aiming at a specified mark; it is known with practical certainty in other cases by means of *extended* statistics. (2) To ascertain the law of dispersion, *i.e.*, the relative frequency of each variation from the central value: this is known *a priori* in the case of artificial combinations; in other cases it is calculated (on the assumption of the exponential Law of Error) by means of the observed errors. Mr. Galton's method, which is of a graphical nature, is also given (p. 473). This preliminary discussion leads to the principal question, "What is the exact nature and advantage gained by taking averages?" By taking a finite number (10) of causes of deviation, Dr. Venn shows, with the important aid of figures, that "the result of taking the average of two or more measurements is to make large errors comparatively scarce". This is then extended to the exponential form, in which the magnitudes vary continuously. The comparative advantage of one method of averaging our observations over any other will thus depend on the "degree of rapidity with which the resulting measures tend to cluster about the centre".

In the 'inverse problem,' the central value and degree of dispersion have to be found from a *few observations* only; and since these cannot be assigned with certainty, we require, thirdly, some estimate of their probable truth. The central value can only be assigned by taking the arithmetical mean, and the degree of dispersion only by treating the few errors from this assumed mean in the same way as we should treat many errors from the true mean. Finally, the 'probable error,' that is, the "limit which it is as likely as not that the discrepancy between the inferred mean and the true mean should exceed," is found as a known multiple of the other means of the errors.

Lastly, the above reasonings are applied to other curves of frequency; and it is shown that in general if the curves are symmetrical, and if either the limits of possible variation are finite, or the falling off of frequency from the mean is very rapid in the case of infinite limits, then the results of taking averages must lead to an improvement on the single results. Particular cases of a more or less exceptional character and of great interest are then discussed, and with these the work ends.

Before closing this review a word or two may be offered on the general standpoint from which Probability is regarded by Dr.

Venn. To regard Probability as concerned with the 'measure of belief' is repudiated as being psychological. This is certainly true. But it does not seem to me that the author fairly deals with a *third* alternative view which is different from his own, but which is certainly not psychological. The view to which I allude is best briefly expressed by Jevons—"The theory of probability deals with *quantity of knowledge*," or again "with knowledge mixed with ignorance". Surely this view cannot be rejected on the ground that it is psychological. Dr. Venn's objections to this mode of treating probability are partly due to opposition to the attempt "to evoke knowledge out of ignorance"—*i.e.*, for example, our ignorance as to whether head or tail will fall uppermost can be no reason for anticipating that these will occur equally often. His clear exposure of this *a priori* method of arguing seems to me the most valuable part of his work on the subject. But if we stick fast to the view that probability is simply a measure of the data upon which an individual has to proceed in any given case, we shall not be in danger of making our ignorance a ground for prediction. It seems to me that all writers understand by probability a measure having reference to a *single case*. The type of proposition considered is—'The probability that *this* S is P is *p*'. Now the general position maintained in the *Logic of Chance* is that such a proposition is meaningless. The allied proposition to which a meaning is assigned is 'The fraction *p* of the whole class S is in the long run found to be P'. But this class-fractional proposition cannot be substituted for the above probability-proposition. For, as the author himself urges, the 'this' of the probability-proposition belongs to many other classes besides S; and it is wholly arbitrary to select one class rather than another. But surely everyone means by probability a measure which is *relative* (not, indeed, to an individual but) to a particular condition of knowledge on the subject. Statistical knowledge, *if the individual possesses it*, is very desirable; but even if he possesses such knowledge, he would not apply it without further consideration. For every floating scrap of information which he may possess ought to influence his estimate. Logic, then, should indicate how explicit data of knowledge go to form the proper measure of probability relative to such knowledge. It is impossible really to eliminate this characteristic of relativity. If I *know* that a particular infant has died or will die in its first year, the probability of its death to me is certainly not that derived from statistics of infant mortality. If I know that it is *ill*, the same remark applies. In such a case I should be glad of statistics which were adapted to infants suffering from the particular illness observed, but in the absence of such information, surely there is some estimate of probability which Logic may justify as reasonably following from the combined pieces of knowledge I possess on the subject. Such estimates Dr. Venn calls "precipitate"; but I do not see how any estimate of probability can be other than "precipitate," since omniscience would assign to every con-

jecture the value 0 or 1. Again, it is objected that probability cannot help to determine conduct in any particular case, because conduct must depend on the estimates we form of the desirability of certain objects. But this surely involves a confusion between 'the measure of probability' and the 'measure of expectation' (as it is technically called). I conclude, then, that the class-fractional proposition and the probability-proposition cannot be regarded as identical: for (1) we cannot in general pass from the probability to the class-fraction, since this would involve the evolution of knowledge out of ignorance; and (2) we cannot in general pass from the class-fraction to the probability, since this would involve the neglect of any specific information we might possess about the particular case.

W. E. Johnson.

Vorfragen der Ethik. Von Dr. Christoph Sigwart. Freiburg i. B.: J. C. B. Mohr (Paul Siebeck), 1886. Pp. 48.

In this essay (the publication of which, in tribute to the veteran Zeller, has been already chronicled in Mind xii. 477), Prof. Sigwart offers certain general reflections on the ethical problem and the conditions of its solution. The essay is marked by the author's well-known subtlety and acuteness, and deals suggestively—though in the form of aphorism rather than of argument—with some of the chief obscurities and difficulties connected with the basis of morals.

The author begins by contending for the importance of the question of the highest good, reserving for subsequent discussion the true place of moral laws as means to the attainment of this good. The question 'What ought I to do?' arises from the different lines of activity that are open to us, and the conflict of impulses that prompt to action. In this way it is indicated how the discussion of the ethical question must be based on the psychological analysis of activity. The proximate determination of the highest good is sought in the common characteristics which belong to all voluntary action. In this connexion stress is laid upon the following points. In the first place, the end of action is always some actual future condition of real beings to be brought about wholly or in part by the action. No ethical system can afford to disregard consequences in this sense; action always aims at a result—a proposition enforced with reason against the formal generality of Kant's notion of the good will. Throughout the whole essay, indeed, point is given to the author's contentions by a polemic against Kant's view of moral law. In the second place, the character of any and every end is further determined by the nature of volition. No end can affect the will unless it have an emotional character. The realisation of the end must promise some kind of satisfaction—the hope of its attainment giving pleasure, the fear of the opposite giving pain. In discussing this proposition, the author does not fail to shed light on

the difficult question of the relation of feeling to action. The juggle between one's own pleasure and that of others, which has in its day served the purpose of utilitarian moralists, is of course exposed. If it is the feeling of pleasure (or pain) that moves the will, then it is one's own pleasure (or pain) that does so. "There is no such thing as a perfectly unselfish volition. The truth has been properly emphasised that what is no one's gain, and excites a feeling of pleasure in no conscious being, cannot be a rational end of conduct; but when to this it is added that a man should not seek his own satisfaction, but the happiness of others, an equally impossible demand is made. By his nature a man wills only what brings satisfaction to his own personal feeling; in every volition he wills in a certain sense himself, his own happiness." In this sense, not Eudæmonism merely, but Egoism, characterises our volition. From this it would seem to follow—a result familiar to us from Prof. Sidgwick's *Methods of Ethics*—that Ethical Hedonism can only be maintained in an universalistic sense through the denial of Psychological Hedonism. Much of what follows in Prof. Sigwart's essay would seem to be devoted to warding off this conclusion. Self-realisation (so his contention may be expressed) is always the end; but the full realisation of the individual implies the self-realisation of the other members of the community. Pleasure is sought in every act of volition; but it is only through a narrow interpretation of what is meant by pleasure that passive fruition comes to be looked upon as the end of all activity. Pleasure is not the mere wages of work; "the pleasure-element, through which the thought of an end stirs to action, may lie in the very consciousness of volition and activity". "Self-love"—but in a wider meaning of the term than that which Kant would allow—is something that cannot be uprooted from our consciousness. "Is not the realisation of a moral ideal in my person only the highest and most perfect efficiency of self-love?"

These considerations, as expressed by Prof. Sigwart, are of the highest value. There can be no doubt that a misleading issue has been sometimes raised in psychology and in ethics by the abrupt antagonism in which pleasure is set to activity and the pursuit of ideal ends, and also in the opposition of self-love and benevolence. Pleasure is the accompaniment of activity, not merely its reward. Yet the real question lies behind as to whether it is merely on account of the greater quantity of accompanying or resultant pleasure that one end is chosen in preference to another. It would seem that in the most energetic activity, whether personal or 'altruistic,' the element of pleasure is often one of the least prominent elements in the conception of the end being realised. The object aimed at is identified with self; so that self-realisation may be called the end. Pleasure or satisfaction comes with its attainment, and often with its pursuit, so that, from the point of view of feeling, it may be said to be self-satisfaction (that is, pleasure) that is gained and that

is sought. But is it sought simply *quâ* pleasure or satisfaction, so that, quantity of pleasure being known, the quality of the end may be disregarded? The author does not affirm this conclusion, being mainly concerned to oppose the Kantian position that moral law takes the form of a necessity of pure reason opposed in nature to every kind of personal feeling. Yet it appears to me that one of the reasons why the rise and growing power of moral ideals is declared to be not only one of the most important but also "one of the most puzzling phenomena of history," is the stress laid, in the psychological part of the essay, on the element of pleasure as the sole stimulus to action, apart from the character of the activity or end to which it belongs.

When the author passes to the further determination of the ethical end, there is much everywhere that is admirable in his statement, if something also that might admit of further discussion. The highest end for a man must be a permanent condition of his nature, and yet such a condition as will recognise the change and progress involved in human life, and the dependence of the individual on nature and his fellow-men. The kinship of man with nature, and his relation to his fellows, forbid the supposition of individual self-sufficiency. Every firmly-conceived end that proceeds from the universal nature of man must be conceived and willed as universal. The end must, therefore, be a common end, which all alike seek, and in which all alike have part: "the notion of a highest good is widened to that of a collective condition of a society of men". The contention here against the separation of private and public morals, of individual and social ethics, is clearly emphasised and of much value. Starting from the individual point of view, there is no little interest in tracing, as the author does, the way in which the perfection of individual ends requires the adoption of the social standpoint. It is here, too, that the transition is made—somewhat too smoothly, as it seems to me—from the 'is' to the 'ought to be' in conduct. From the social nature of the highest good it follows further that all individuals must have the same moral end, and that it can only be reached through the harmonious activity of all. To the attainment of this end moral laws are only means; morality (as is well shown) does not admit of ultimate and satisfactory statement in the form of laws.

The further account of the character and content of the moral end is given in a few suggestive pages. The notion of the highest good is said to stand in need of "a community of men of pure moral disposition," and to be perfectly realisable only on this condition; on the other hand, a moral disposition is defined as "the constant direction of the will to the highest good". To have worked out the mutual relation and the application of these positions, as well as of other suggestions in the essay, would have led the author beyond the limits he has set himself. But the hope may be expressed that this is not his last contribution to the elucidation of ethical questions.

W. R. Sorley.

VII.—NEW BOOKS.

[*These Notes (by various hands) do not exclude Critical Notices later on.*]

A Study of Religion: its Sources and Contents. By JAMES MARTINEAU, D.D., LL.D., Late Principal of Manchester New College, London. 2 Vols. Oxford: Clarendon Press, 1888. Pp. xx., 417; vi., 410.

The critics have not exhausted the interest of Dr. Martineau's *Types of Ethical Theory* before he has been able to complete the task to which, with all the weight of years upon him, he stood committed in that work. An article in the present No. of MIND shows what suggestiveness continues to be found in his ethical exposition: if for no other reason, 'Critical Notice' of his *Study of Religion* may therefore be deferred (till next No.). The new work is strictly complementary to the earlier treatise. So long as it was not there, the author could himself but speak of the ethical scheme of the *Types* as left "hanging in the air". However, as in the historical part of the ethical treatise he was notably apt to fall back upon considerations of general philosophy, so now in the *Study of Religion* we find him not only concerned to supply the basis wanted for his theory of morals but also ready to expatiate over the whole philosophical field; though never, it may be, without the practical reference that is, indeed, of the very essence of philosophy. Thus the doctrine of "Theism," which for him alone gives meaning to moral action—set out positively in bk. ii., controversially in bk. iii., and followed by a final book on "The Life to come"—itself follows, after a short "Introduction," upon a consideration of "The Limits of Human Intelligence" in bk. i. The main topics of this fundamental book—(pp. 35-136)—Form and Conditions of Knowledge, Appreciation of Kant's Doctrine, Absolute and Empirical Idealism, Relativity of Knowledge—indicate clearly enough its character; but general philosophical disquisition does not end here. Book ii., filling half the work with its positive doctrine of "Theism," includes the discussion of Cause and, within this, the author's theory of Perception; nor elsewhere in this book, as again in bk. iii. where the question of Free-will is very comprehensively treated (vol. ii., pp. 195-324), is there any lack of the matter that others bring forward in treatises of philosophy or psychology. Let these words of external description for the present suffice to give a notion of the remarkable enterprise now so happily achieved.

The Politics of Aristotle. With an Introduction, two Prefatory Essays and Notes Critical and Explanatory by W. L. NEWMAN, M.A., Fellow of Balliol College and formerly Reader in Ancient History in the University of Oxford. 2 Vols. Oxford: Clarendon Press, 1887. Pp. xx., 577; lxvii., 418.

In this goodly instalment of a long-expected work, vol. ii. gives—besides two prefatory essays on the formal aspects of the treatise and appendices (one of them, pp. 385-400, comparing the doctrine of the *Ethics* and of the *Politics*)—the text of the first two books, with elaborate apparatus (pp. 57-384) of notes critical and explanatory; and will be followed, in due time, by one or more other volumes, dealing with the remaining books in a similar way. In vol. i. of "Introduction," the author has sought to throw light on the political teaching of Aristotle by viewing it "in connexion not only with the central principles

of his philosophical system but also with the results of earlier speculation," especially Plato's; while, at the same time, the manifold relations of the treatise to Greek literature generally have been kept steadily in sight. There is less of systematic attempt at illustration from later political thought, but what there is in this kind is of a striking character. The exposition includes a very thorough analysis of the (four) books that more especially embody Aristotle's doctrine; the subsidiary ones being more lightly passed over, while reserved for treatment by way of commentary on the text. Everywhere the work gives the impression of a scholarship at once broad and exact, and not less of that maturity of thought which is even more necessary in one that would lay hand to any purpose on the *Politics*.

Faith and Conduct. An Essay on Verifiable Religion. London: Macmillan & Co., 1887. Pp. xiv., 387.

The main object of this book is "to deduce from an analysis of the facts of consciousness, and from the nature of conduct, proof of the truth and the necessity of religion". The author, while not limiting his own beliefs to that which can be established philosophically, professes to deal at present only with "verifiable religion," and with verifiable religion only in so far as it is personal, and not in its social and historical manifestations. The first twelve chapters (pp. 1-192) form the philosophical groundwork; the remaining seventeen (pp. 193-387) are concerned with the determination of those beliefs of personal religion which, in the author's view, can be established without any appeal to authority. The belief that he regards as the basis of everything else is "belief in the objectivity of the inner voice" that makes itself heard in the commands of conscience. First he gives some reasons for holding that neither physical nor historical evolution can be completely explained without supposing it to be guided, at critical points, by an external power. This argument, however, he regards as only an outwork. What he is chiefly concerned to prove is that man's surroundings are not only physical and social but also "spiritual". "In the spiritual universe the facts are ideas and possibilities," and to these man has to adapt himself, in his conduct, as to something outside and above him. "If . . . men cannot discover what is right, nor accomplish it without aid from above, religion stands justified" (p. 61). Now "the voice which speaks in conscience bears in itself the claim to come from without in just the same way in which the perceptions of sense do. Naturally and instinctively we thus regard it; and if we come to doubt of its external origin, it is only in virtue of the same intellectual processes which have led men to doubt of the externality of the things of sense" (p. 174). The ground on which belief in the externality of the things of sense can be defended against scepticism is that it is necessary for action. Still more necessary is the belief in the reality of other persons, which is just as incapable of proof on intellectual grounds as the belief in the real existence of material objects. The law of causation, again, is incapable of any proof except that which is derived from the necessity of belief in it in order that we may act consistently. But since conscience, like sense-perception, "suggests as its origin and source something outside and beyond ourselves," exactly the same argument on practical grounds that justifies the belief in the law of causation, in the existence of other minds and in the reality of material objects, justifies belief in the objectivity of the source of conscience. The philosophical doctrine finally arrived at is "that religious idealism according to which the material world is a manifestation of God, and its objectivity resides, not in its materiality,

but in its relation to his fixed and eternal being. . . . In this view our conviction of the real existence of other conscious beings, and of the externality of the source of the voice that speaks in conscience, will repose on our certainty that God would not deceive us, that all his revelations are revelations of truth and not of falsehood" (p. 180).

The Religious Sentiments of the Human Mind. By DANIEL GREENLEAF THOMPSON, Author of '*A System of Psychology*,' '*The Problem of Evil*,' &c. London: Longmans, Green & Co., 1888. Pp. viii., 176.

Mr. Thompson's present work is a study of the "science, not of *religions* as they exist or have existed, but of *religion* as a general fact of conscious experience". His aim is rather to determine what beliefs can rationally be held about the supernatural, than to describe the process by which the supernatural comes to be believed in; though, in accordance with his traditional view of philosophic method, he makes an investigation of this preliminary to his determination of the limits of rational belief, and, more generally, bases his religious philosophy on his previous work in psychology and ethics (see MIND x. 115 and xii. 465). Religion is defined (p. 4) as "the aggregate of those sentiments in the human mind arising in connexion with the relations assumed to subsist between the order of nature (inclusive of the observer) and a postulated supernatural". The notion of the supernatural is found to be the inevitable background of all positive knowledge. "The distinguishing characteristic of the notion is the negation of the natural. It is the *non-A* of which nature is the *A*." We can only think of it by ascribing to it the attributes of nature; but "whatever attributes are assigned to supernatural existence, those upon which the reflective mind rests with the least uncertainty and the most confidence are the most general and the farthest from particular sensational experience". The impulse to imaginative constructions of a supernatural world is the desire to remove the limitations to knowledge and activity. The test of the truth of these, as of all constructions, is verification; "and this verification is in the last resort the presentative experience of the individual". We can have no experience of a supernatural world during life. The condition of any such experience being possible is, then, the continuity of consciousness after death. Is there any ground for asserting this? "On every side, from beginning to end," the author concludes, "this subject is beset with difficulties; but altogether I am inclined to the opinion that the ground for the assertion of *post-mortem* personal self-consciousness in identity with *ante-mortem* self-consciousness is firmer than for the contrary belief" (p. 70). (And, on the same ground, we may have to "return to the pre-existence doctrines of the ancient philosophers".) An examination of the rational conditions of the construction of a supernatural world reveals "the necessity of testing all ideals and hypotheses respecting the supernatural by the canons of utility". "It thus becomes our duty to examine the bearing of the different leading constructions of the supernatural upon human life and conduct" (p. 82). This is the point reached at the end of the general investigation of parts i. and ii. ("Religion and Religious Sentiments," "Religious Sentiments in relation to Knowledge"). In parts iii. and iv. ("Religious Sentiments in relation to Feeling and Conduct," "The Scientific Education of Religious Sentiments") the effects of actual and possible types of belief about the supernatural world are considered, with the result that there is a conceivable type of belief that is highly favourable to morality. The whole interest of the investigation is found to centre in the question of personal immortality, a belief in which,

though not necessary for the existence of altruism, tends powerfully to promote it, in so far as it opens up the possibility of a more complete realisation of the moral ideal. When we speculate about a future world, we are obliged to affirm the continuance of some kind of human society, and this may be conceived either as monarchical, oligarchical or democratic. In the first two cases we have monotheism or polytheism; in the third case there is no assertion of a personal Deity. In no case has the search for the grounds of existence found its term; for "every conception we can have of a supernatural world is a symbolical or hypothetical image of another natural world with a supernatural unknown behind" (p. 78). The tendency of a belief in Deity is (or will become in the future) more moralising in proportion as the idea of "cause" or of "sovereignty" recedes and God is thought of as "the guarantor of the realisation of ideals". "Christianity and Buddhism, the two religions whose founders were most thoroughly altruistic in their teachings, furnish no exception, but only confirmation of the truth that the notion of authority and sovereignty in religion is damaging both to individual and social development, and should never be regarded under the best circumstances as of more than temporary and provisional value, to be dispensed with as quickly as possible" (pp. 119-20). A very good summary of the author's most general conclusions as to rational religion is given in chap. 38 (pp. 146-7). The final chapter on "Religious Education" (pp. 157-176) deals with the question of the teaching of religion in American schools and universities, and is of no little practical interest.

Biographies of Words and The Home of the Aryas. By F. Max Müller. London: Longmans, Green & Co., 1888. Pp. xxvii., 278.

So much space was given in the last No. to a consideration of Prof. Max Müller's philosophising in *The Science of Thought*, that it may suffice here to chronicle the appearance of the present volume, which seeks to illustrate, in a popular fashion, his views of the deeper import of linguistic study. It reproduces some magazine-articles on the fortunes of particular words (as the word 'fortune' itself, 'person,' the words for weighing, buying, selling, &c.), written with all his wonted interest of style; and adds to these a new discussion of the question of the original Aryan home so much debated in recent years, with an ordered scheme of the word-"statistics" that give a clue to "the earliest Aryan civilisation". On both questions, he finds himself able to stand, in the main, by his earlier conclusions. As to the philosophical import claimed for word-history, he lets drop at the beginning a remark that gives a fair suggestion not more of its range than of its limits. He there speaks (p. i.) of words as "the materials of thought only". That seems pretty clearly to imply that there is a fact of "thought" that needs independent consideration; and for such consideration the name 'philosophical' may well be retained, even though it is true, as he goes on to urge, that the words which we know and use as "materials" of thought are no rough blocks, but themselves instinct with thought that has gone to their fashioning.

The Story of Creation: A Plain Account of Evolution. By Edward Clodd, Author of '*The Childhood of the World*,' &c. London: Longmans, Green & Co., 1888. Pp. xv., 242.

The purpose of this volume is to give a popular account of the theory of Evolution. It is in two parts—"descriptive" and "explanatory," and in the latter a chapter on "Social Evolution" deals with Mind, Society, Language, Art and Science, Morals and Theology. The prin-

cipal points here are, that man owes the possibility of high mental development in great part to the prolongation of infancy (pp. 210, 214); that "the moral sense or conscience is the outcome of social relations, themselves the outcome of the need of living" (p. 218); that the "heightened tone" which is a "note of our time" is "in the main due to the progress of science, using the term as including not merely knowledge of the operations of nature, but knowledge of human life as affected by divers causes, and of the community of blood in all mankind" (p. 221); and, lastly, that "the evolution of belief in spiritual beings is a thing apart from the evolution of morals" (p. 225), so that "in the end, when it is seen that theories about gods and all other spiritual beings have nothing whatever to do with man's duty to his fellows, theology and morals will again become distinct" (p. 228). "We began," the author sums up, "with the primitive nebula, we end with the highest forms of consciousness; the story of creation is shown to be the unbroken record of the evolution of gas into genius" (p. 228). That is one way of putting the matter.

The Morality of Nations: A Study in the Evolution of Ethics. By Hugh Taylor. London: Kegan Paul, Trench & Co., 1888. Pp. 316.

The special object of the present work is to study morality as a science. "The science of morality," or the study of the actual conduct of men, the author premises in his first chapter, is to be carefully distinguished from "the art of morality," or the determination of what ought to be. This distinction coincides with the distinction between "the evolutional" and "the educational standpoint in morals". Morality, as a science, is concerned with the social conditions to which the evolution of morality is due, while morality as an art consists essentially in educational precepts, laid down as ideal rules to which actual conduct ought to conform. The fundamental law of social, as of biological, evolution is found to be "the law of antagonism" (c. ii.). This is still manifested in international morality, as seen in practice; for what rules here is "the primary instinct of antagonism," which moralists condemn when it is manifested by individuals (cc. iii.-iv.). Yet it is precisely the struggles between nations that give occasion for those actions of individuals that moralists regard as the noblest. And both fact and theory lead to the conclusion that, "given a tendency to individual antagonism, the antagonism of opposing combinations ensures the mutual harmony of the parts". On tracing the series of causes further back, it is seen that within the nation itself, morality—or at least the morality of highly civilised nations—can only have been developed out of primitive antagonism between individuals, and only as the result of political control, that is, of the coercive action of a central power (cc. v.-x.). "We are thus forced to substantially the same conclusion as that reached, by a different method, long ago by Hobbes" (p. 139). "If Hobbes had trusted more to his educated ideas of right and wrong and less to his observation, he might have been misled. But, forming a general conclusion from the average action of mankind rather than from self-interrogation, he did not shrink from the conclusion that the average virtue of mankind is the result of a state-adjustment of pains and penalties, and that if that state-adjustment be disturbed, anarchy is the result, and justice has no place" (p. 143). "Communities which show traces of another relation between morality and law, such as those village communities where law appears to be merely fossilised custom, in so far as they have been subjected to this form of law alone, have lacked the conditions which develop a high form of morality and civilisation, since no such morality and civilisation

has resulted. Whatever causes may be assigned for the failure, the fact of that failure is sufficient to justify the evolutionist in his disregard for these communities, since he is not concerned with the possible human relations which might have given rise to a morality, but with the actual human relations which have given rise to the most advanced forms of morality" (p. 201). "The antagonism of combinations is the indispensable condition of vitality. To keep this antagonism within bounds, there is need of a political control, and it is in the growing need for this political control that the early communities of the West differed from those of the East" (p. 205). In the later chapters (cc. xi.-xiv., "First Moral Combination: The Family"; "Forms of Moral Composition"; "Economic Morality"; "Political Morality") the effects of the struggle among social groups within particular societies are considered. The general conclusion is that, while morality is not developed in the first instance apart from the struggle among conflicting social groups as well as individuals, the new formation of groups within an advanced society is always accompanied by a reversion towards the primitive relation of antagonism, that is, towards the present character of international as distinguished from individual morality. This is illustrated in cc. xiii. and xiv. from commercial competition and the relations between political parties. The concluding chapter (c. xv.) is to the effect that, though the process may be long, yet "if individuals have so far modified their fatally antagonistic propensities as to be in harmony and co-operation with one another, there is equally good reason for believing that the evolution of international morality will take the same course" (p. 314). As regards improvement within each particular society, the author's conclusion is, "that if advance is to take place, it must be general, and that beyond a certain point moral progress without social readjustment is impossible" (p. 259). It is a noteworthy "study".

Ethical Forecasts: Essays by William F. Revell. London: Kegan Paul, Trench & Co., 1887. Pp. 176.

These "Essays" are four in number:—(1) A Criterion of the Truth of Religion, (2) The Prospective Readjustment of Religion, (3) The Application of the Law of Causation to Moral Conduct, (4) The Safeguards of Morality. The criterion of the truth of religion, as of truth in general, is found to be "the correspondence of thoughts with things"; and to the author, on applying this criterion, "the agnostic position appears to be the only one that is, theoretically, thoroughly legitimate and unassailable" (p. 73). In the third essay he concludes that if conduct is determined entirely by "mechanical or physical causation" there can be no true moral responsibility, but that in reality the causation of moral conduct is higher in the scale of evolution than purely physical causation, and is not completely expressible in terms of physics but requires the introduction of terms of consciousness and human character. This being so, there is responsibility, moral and not merely legal, for as much of conduct as depends on "the moral self-determination of man". The conclusion of the last essay is that "the laws of the universe, including the laws of human evolution, are on the whole, and in the long run, on the side of human righteousness" (p. 163).

Memory: What it is and how to Improve it. By David Kay, F.R.G.S., Author of '*Education and Educators*,' &c. London: Kegan Paul, Trench & Co., 1888. Pp. xiv., 336.

"Memory, in our view," the author says, "is not simply an intellectual faculty having its seat in the brain, but is, in a great measure, a sense-

faculty, including in its seat the senses, the voluntary muscles, and other parts of the body"; so that "whatever parts are concerned in the production of sensation, or in effecting a movement, the same parts are necessary to a full and complete recollection of it". There are "three kinds or degrees of memory,—the local, the rational and the representative or imaginative". Of these the third, which is the highest, does not depend, like the first two, on associations, but simply on the original impression being "clear, distinct and vivid," and hence "readily reproduced with much of its original character and force". Since there is a separate memory for each sense, the method of training this last kind of memory must be to exercise the memories of the different senses separately, keeping them carefully apart. In education, therefore, "when we wish to exercise the visual memory we must be careful not to call forth the auditory or muscular memories, nor with the motor memory should the forms or even the sounds be awakened. . . . In order to train the auditory memory, the pupil should have the matter read or repeated to him till he has taken it in by the ear; in order to learn by sight he must take in the words by the eye, and form visual images of them, and to learn by means of the vocal organs he must have recourse to reading or repeating aloud" (p. 305). The chapters of the book—which are copiously illustrated by quotations from psychological and other writers in footnotes—are: (1) Memory: What it is; (2) Matter and Mind; (3) The Body; (4) The Senses; (5) Mental Images; (6) Mind, Conscious and Unconscious; (7) Attention; (8) Association of Ideas; (9) Memory: How to Improve it.

Practical Education. Treating of the Development of Memory, the Increasing Quickness of Perception, and Training the Constructive Faculty. By CHARLES G. LELAND, Late Director of the Public Industrial Art School of Philadelphia, and Author of '*The Minor Arts*,' &c. London: Whittaker & Co., 1888. Pp. xiii., 280.

The author is well known as the advocate of a system of "practical education" or manual training, which, by his personal efforts, he has been able to get carried into effect on a considerable scale in America, and which is now, as may be seen from the Appendix to the present volume, attracting attention in Germany. Of this system the principle is that for all kinds of hand-work the best preparation is training in "the minor decorative arts," and that the common basis of all these is "design". The first part of the volume (pp. 1-119) is a description of the author's method, together with a statement of its theory. His method differs from that of the educational theorists who have advocated the teaching of particular trades to children (as he points out) by its recognition of the psychological principle that the generalised precede the specialised activities. As results, he expects, in the first place, to confer on the children themselves, not only a certain artistic culture, but, with increased aptitude for special activities, the capacity to take pleasure afterwards in any kind of practical work, provided it is understood in relation to its end, and not merely viewed as a mechanical operation; and in the second place, as this general artistic preparation for special technical instruction becomes common, a gradual infusion of the artistic spirit into the more mechanical kinds of industry. The remaining four parts of the book (pp. 120-241, "On Developing Memory," "On Creating Quickness of Perception," "Eye-Memory," "On Taking an Interest") treat of general education, and are a plea for increased training of memory and of sense-perception for their own sakes, as "faculties," and independently of any particular knowledge to be

acquired. "The golden rule of learning," in the author's view, is "*One thing at a time, and that thing perfectly*" (p. 138); and the means of keeping the pupil's attention on the one thing is to awaken interest in the cultivation of the "faculty" as distinguished from the learning of particular "facts".

Spinoza. By JOHN CAIRD, LL.D., Principal of the University of Glasgow. ("Blackwood's Philosophical Classics," No. 12.) Edinburgh and London: W. Blackwood & Sons, 1888. Pp. 315.

Though this latest volume of the "Philosophical Classics" series runs a good way beyond the length of its companions, it differs from all of these in limiting itself to an "examination" of its subject's philosophical system. It is true, as the author remarks, that another biographical account was not needed after the recent works of Mr. Pollock and Dr. Martineau; yet the relation of the volume to the others of the series in which it forms part—the series having a special aim of its own—was also to be considered. Such as it is, the book seeks to deal with Spinoza's philosophy from an independent point of view, with result that shall have 'Critical Notice' later on.

A Critique of Kant. By KUNO FISCHER, Professor of Philosophy in the University of Heidelberg. Translated from the German by W. S. HOUGH. Authorised English Edition. London: Swan Sonnenschein, Lowrey & Co., 1888. Pp. xi., 188.

The translator is somewhat at fault when he says that Fischer's *History* has been "until a recent date [see MIND xii. 610] wholly inaccessible to English readers," since Mr. Mahaffy, as far back as 1866, extracted from it the original exposition of the *K. d. r. V.* Upon that, however, the historian made a considerable advance in his second edition, not only of the Kant-volumes (iii., iv. of the whole work), but also of the Fichte-volume (v.), with which was incorporated in 1884, as "Introduction to the History of the Post-Kantian Philosophy," a matured estimate of the philosopher's whole achievement that had already been published separately in 1883. It is this piece that is now translated; and, as a comprehensive as well as penetrative—while yet always lucid and intelligible—judgment upon Kant's thought in its inner development, it should prove of excellent service to English students. As regards the rendering, there can be no doubt of the translator's competence, shown as it is in his careful consideration of equivalents for the terms of art (whether or not he may have in all cases adopted the most unexceptionable ones). It appears also in the high level of faithful reproduction that in general he attains. Yet, while he has "aimed to be exact," it cannot be said that he has always succeeded. Thus, in the paragraph begun on p. 21, neither the first nor the second sentence is quite satisfactory, as anyone may see who will compare with the original the words rendered (in the one case) "nor is it pure subject," and (in the other) "since these belong to the constitution of the human body". Again, on p. 22, we read what there is no need to go to the original to reject: "Sense is one faculty, understanding another; this (!) is receptive of material, that (!) form-giving and productive, &c." To be sure, the more advanced student would not here be led astray by so obvious a transposition of pronouns, but a beginner might be sadly confused. It is Dr. Hough, we observe, that has undertaken to inaugurate the projected "Library of Philosophy," mentioned at the end of the present No., with a translation of Erdmann's *Grundriss d. Gesch. d. Phil.* Nothing could be more welcome; but may one hope that the translator will be

very careful with a work whose condensed expression it should tax anybody's powers to convey?

A Student's Manual of Psychology. Adapted from the *Katechismus der Psychologie* of FRIEDRICH KIRCHNER by E. D. DROUGHT. London: Swan Sonnenschein, Lowrey & Co., 1888. Pp. viii., 344.

Attention was drawn in MIND ix. 318 to the merits of Kirchner's *Catechism of Psychology.* They are such as to make the present translation of it a really useful addition to the English "student's" psychological library. He will here get very good general indications of the history of the science, and be put in easy possession of the main results of German inquiry in this century. The translation cannot be called other than satisfactory. There is a little looseness at the beginning that might easily have been avoided: as where, on p. 1, "sich stets wiederherstellende Einheit" is rendered by "unbroken unity"; or where the author's declaration that the *existence* of the soul will have to be proved, followed by an enumeration of the words in different languages for 'soul,' gets curiously changed into "We may notice the names for *mind* as some evidence that *mind* exists". As the translation proceeds, blemishes like these appear not to recur or to recur but rarely. The translator may have judged, on the whole, rightly in omitting references to German books that could seldom be turned to. It is not so clear that he has done well to override the author's distinction of types and give to all parts of the exposition an equal prominence.

The Tshi-speaking Peoples of the Gold Coast of West Africa: Their Religion, Manners, Customs, Laws, Language, &c. By A. B. ELLIS, Major, 1st West India Regiment. London: Chapman & Hall, 1887. Pp. vii., 343.

This volume deserves the particular attention of all students of savage religion and savage psychology in general. Its title, at least when quoted without the full length of tail, might easily cause its importance to be overlooked. More significant and effective was the name of the author's earlier book, *The Land of Fetish;* though it is now one of his objects to correct, after more careful inquiry, something in his previous representation of negro religion. During a long service on the Gold Coast, he has not been deterred by the enervating influences of the most oppressive of human climes from making a remarkably close investigation of the ways of savage thought, so easily misinterpreted when superficially observed. Whether, with all his care, he has even yet succeeded in reaching a true and final interpretation of some of the facts he notes may be doubted; but what cannot be questioned is the freshness and genuineness of the contribution he here makes to the literature of anthropology. Especially noteworthy are his remarks on "Fetishism" in c. 12. Though the more careful among modern writers have ceased to use the word in De Brosses's indiscriminate sense, there is still so much confusion in its current employment that Major Ellis does good service in now (if not formerly) deliberately laying it aside in his general description of West African religion, and bringing it forward only when the question is whether the savage negro is in the way of worshipping material "odds and ends" (as Mr. Lang has happily called them, see MIND iv. 453), like sticks or stones, credited with some kind of spiritual attributes of their own. That there is little or no trace of such worship among the tribes of the Gold Coast, is the conclusion to which the author has been brought by his more protracted inquiry. The "tutelary deities" in such accidental material shape, which some "individuals"

procure with formalities carried out by themselves, or which "particular sections" or "companies" in a tribe obtain through the intermediation of priests, acquire in all cases, he believes, their divine character by communication from spirits attached to quite a different order of material phenomena. The true gods of the negro, all more or less maleficent in character, are found by Major Ellis to be mainly nature-powers—connected with river, lagoon, ocean-surf, forest, mountain, or the like. It is such powers, imagined in some kind of exaggerated human form, that, on the one hand, are liable, in certain very exceptional cases, to be elevated to a higher level of deity, with an ascription of relatively universal influence; and that, on the other hand, lend themselves, in the great majority of instances, to a diffusion of their spiritual activity into conveniently transportable objects, with or without the help of priestcraft. While not denying the evidences of ancestor-worship, especially in the more settled society of Ashanti, and while expressly connecting the development of family-divisions with a worship of animals, it is this conception of nature-worship that the author is chiefly concerned to bring into view as the result of his search. Very curious is his account of how, beside (if not above) the small class of "general deities" elevated out of the multitude of nature-powers classed as "local deities," one deity not maleficent—and therefore only recognised rather than worshipped—has found a place, under the name of Nyankupon; this is a savage rendering of the Christian God, adopted within the last four centuries from the overmastering European settlers on the coast, in tribute to their masterfulness, and not any relic, as some have supposed, of a purer primitive faith. Other notable features of the book are the chapters on "The Priesthood" and on "Psycholatry and Human Sacrifices". The author finds much evidence of artful conspiracy to deceive among the priesthood of both sexes. His account of the animistic conceptions of the negro—developed, as he recognises, not least in explanation of the phenomena of dreams—is less clear and consistent than could be wished, but includes some apparently new facts that should henceforth be reckoned with in any theory of primitive psychology.

Social History of the Races of Mankind. Second Division: 'Oceano-Melanesians'. By A. Featherman. London: Trübner & Co., 1888. Pp. xxxii., 418.

After an interval of one year (see Mind xii. 295) the author completes with this volume that second of the six (irregularly published) divisions of his whole work which is occupied with his race of 'Melanesians,' scattered over the islands and islets of the Indian and Pacific Oceans. The two 'Melanesian' volumes, about equal in external size to the two single volumes previously given to 'Aramaeans' and 'Nigritians,' do not really much surpass one of these in amount of letter-press; a different thickness of paper being judiciously chosen to give to the volumes a uniform appearance. The author may now be congratulated upon thus having a full half of his laborious course behind him. There is nothing left to be said on his astonishing industry or on the straightforward directness with which he succeeds in presenting the results of his vast reading. One may doubt whether the affirmative confidence of his general statements regarding the 'Races'—as to their independence of each other or as to the relationship of the divisions made within each—is always sufficiently grounded; but no unprejudiced person will be other than grateful to him for having conceived so great an enterprise and for carrying it through with so much devotion. The burden of his present Preface is an argument

against "the Darwinian hypothesis of transformism," that can here only be mentioned.

The Analytic Theory of Logic. By WILLIAM RENTON. Edinburgh: James Thin; London: Simpkin, Marshall & Co., 1887.

This is a pamphlet of 16 pages on Symbolic Logic, in which is effected the demolition of Aristotle and the Schoolmen. "He (Aristotle) has *no idea*, &c.; and is *absolutely in error* in supposing, &c. . . . The Aristotelian theory of figure and mood *has no meaning whatever.*" The reader is asked to compare "the symmetry of the results" of the author's analysis with the "brutal methods of the schoolmen". Though, as to Boole, it is allowed that "it would be impossible to surpass the ingenuity of some of Boole's transformations," yet the author would tacitly repudiate the 'indeterminate' result of the logical converse of multiplication which Boole so much emphasises. This repudiation is, in fact, the key to the whole theory presented to us. Let us see how it works. On p. 3, "There is no such thing as an animal that is a rigid body" is written symbolically "$ra = 0$, whence $r = o/a$, or 'a rigid body is not an animal' . . . The symbol o/a is thus the mathematical expression for the term not-a". So if v means vegetable, $v = o/a$. Hence $r = v$, or 'a rigid body is a vegetable'. (The author would have us observe "the elegant results of his analysis".) In a similar way, he proceeds to "prove" the Laws of Thought; and, after several substitutions, he reaches that of Identity: the logician of ordinary training would have supposed that this law was assumed in the possibility of making any substitution whatever. Thence follows "the remarkable theorem that *the laws of Thought are fundamentally identical*". However remarkable this theorem may be considered, the author hardly does himself justice, as his powerful analysis would clearly lead to numberless other even more remarkable theorems. Some examples, expressed or suggested, will suffice to show how the fabric of Aristotle totters under the blows dealt by this masterhand. Thus we have hitherto been taught that A E are impossible premisses in the first figure. But not at all. On p. 11, 'No Spartans are Athenians; all Athenians are Greeks' yields the conclusion, 'The Spartans are not the Greeks in question'. Poor Aristotle would have supposed that the conclusion was a mere repetition of the first (minor) premiss and that there was no elimination in the case at all. Similarly, p. 11, take I A in the first figure. 'All Spartans are Greeks; some not these Greeks are animals' yields the conclusion, 'Spartans are not animals'. It is true the author writes "Athenians" in the place of 'animals,' thereby modestly concealing the really novel and remarkable character of the conclusions derivable by his method. Again (p. 12, § 32), as a pair of negative premisses: 'All Egyptians are non-Greeks; no non-Greeks are Athenians; ∴ no Egyptians are Athenians'. Aristotle would have stupidly called this first premiss affirmative, for (p. 7) "his error was to conceive the negative as attached to the copula". Lastly (§§ 26 and 34), as a case of inference from two particular premisses: 'A quarter of all men are fighting animals; and a third of all fighting animals are cocks and bulls'; ∴ *multiplying* our premisses, 'One-twelfth of mankind are cocks and bulls'. The weakness of Aristotle would have led him to suppose that this unexpected conclusion really depended on the tacit *universal* proposition, 'All fighting animals are men,' the truth of which he might have hesitated to accept. There are other methods and results in which the Aristotelian student would feel more at home; but in the main we are sure the recognition of Mr. Renton's system will (when it comes) mark a new era in the history of logical doctrine.

The Ethic of Freethought. A Selection of Essays and Lectures. By KARL PEARSON, M.A., formerly Fellow of King's College, Cambridge. London: T. Fisher Unwin, 1888. Pp. 446.

Prof. Pearson's Selection of Essays and Lectures derives its title from the author's "standpoint that the mission of Freethought is no longer to batter down old faiths," but to attempt the construction of a new basis of rational conduct. The volume is divided into three sections:—"Freethought" (pp. 13-134), "History" (pp. 137-314), and "Sociology" (pp. 317-446), each consisting of five papers. Sections i. and iii. consist almost wholly of lectures, while Section ii. consists wholly of reprinted essays. The titles of the papers of Section i. are—"The Ethic of Freethought," "The Prostitution of Science," "Matter and Soul," "The Ethic of Renunciation," "The Enthusiasm of the Market-place and of the Study". Of the next Section, the first two essays—"Maimonides and Spinoza," "Meister Eckehart the Mystic"—were originally published in MIND (viii. 338 and xi. 20). These two papers have been selected as "fairly closely related to points treated in the first section"; the last three—"Humanism in Germany," "The Influence of Martin Luther on the Social and Intellectual Welfare of Germany," "The Kingdom of God in Münster"—as dealing with "a period in which the forces tending to revolutionise society were in many respects akin to those we find in action at the present day". The five papers of Section iii. are entitled—"The Moral Basis of Socialism," "Socialism in Theory and Practice," "The Woman's Question," "Sketch of the Relations of Sex in Germany," "Socialism and Sex". The sections and papers, although, as the author points out, not so widely diverse as a glance at their titles might lead the reader to suspect, are yet too heterogeneous to admit of any brief summary of their contents—which, besides, do not always come within the province of MIND. The author's chief philosophical conclusions are these:—(1) "*The laws of the physical universe follow the logical processes of the human mind.* . . . Externally, matter appears as the basis of a world, every process of which is in logical sequence; internally, mind pictures a similar world following exactly the same sequence. . . . This identity of the physical and rational processes is the greatest truth mankind has learnt from experience. So great is our confidence in this truth, that we reject any statement of a physical fact which opposes our clear reasoning. . . . Any physical fact which is opposed to a physical law is opposed to a mental law; we cannot think it,—it is impossible" (pp. 74-5). (2) "The only practical method of making society, as a whole, approach the freethinker's ideal of morality, is to educate it, to teach it to use its reason in guiding the race-instincts or social impulses. . . . Society depends for its stability on the morality of the individual. The morality of the individual is co-ordinate with his education. It is therefore a primary function of society to educate its members" (p. 126).

The Theory of Law and Civil Society. By AUGUSTUS PULSZKY (Dr. Juris), Professor of Law at the Royal Hungarian University of Budapest, Corresponding Member of the Hungarian Academy of Sciences, Member of the Hungarian Parliament. London: T. Fisher Unwin, 1888. Pp. 443.

Originally published last year in Hungarian, this book is now reproduced by the author in English. "The choice of English as the vehicle of my ideas is," he writes, "but the due acknowledgment of a moral debt of gratitude. The impulse to the investigations I have tried to pursue, the methods applied, the conceptions of science and its functions

from which I have started, and the ideals I have striven to attain, are derived chiefly from the study of modern English theoretical writers upon law, and of an English school of philosophy. Herbert Spencer's Synthetic Philosophy suggested most, though not all of the general views set forth in these pages, and, on the other hand, Sir Henry S. Maine's publications—which have given rise and date to a transformation of the historical and scientific study of law, not less important, nor less healthy in its tendency than that initiated by Savigny—have indicated the direction in which results were to be sought. To these two great masters of contemporaneous thought I am indebted for the matter of this book, more than I am able to indicate in detail." This acknowledgment is further emphasised by the dedication of the book to Sir Henry Maine. The principal divisions of the contents are as follows :—Book i. "Introductory Doctrines" (pp. 25-98); Bk. ii. "Fundamental Notions": Part i. "Society" (pp. 99-215); Part ii. "The State" (pp. 216-311); Part iii. "Law and Right" (pp. 312-443). The place of "philosophy of law and civil society" among the social sciences is thus indicated :—"The will and consciousness of individuals combining in human communities so as to become public will and public consciousness, and the laws relating to the same, are the objects of sociology or social science, which may be further distinguished into ethics, political economy, the philosophy of law and civil society, and politics" (p. 41). Between the series of the social and of the physical sciences comes psychology. "Social consciousness and activity can be always reduced ultimately to the consciousness and activity of individuals, and their explanation is furnished by the mental constitution and the situation of the individuals. The social sciences—in so far as they are of a deductive character—are therefore founded directly on psychology" (p. 65).

The Reign of Causality: A Vindication of the Scientific Principle of Telic Causal Efficiency. By Robert Watts, D.D., Professor of Systematic Theology in the General Assembly's College, Belfast. Edinburgh: T. & T. Clark, 1888. Pp. x., 414.

This volume consists of a series of chapters, mostly polemical and apologetic, on Prof. Tyndall's Belfast Address, Prof. Huxley's "Automatism," Mr. Spencer's *Biology*, *The Unseen Universe*, the inferiority of "the Huxleyan Kosmogony" to the Mosaic, Prof. Drummond's *Natural Law in the Spiritual World*,—which, it is concluded (p. 357), "cannot be accepted either by scientists or theologians,"—Mill's *Utilitarianism*, &c. The author's position, laid down in the first chapter as "An Irenicum; or, a Plea for Peace and Co-operation between Science and Theology," is that theology and science are at one in not being content with merely formulating the laws of phenomena. Equally, they require not only the rejection of Hume's doctrine of causation but the assertion of final as well as of efficient causes. And science, like theology, can only find rest in "an adequate Causality". "Constituted as man is, he cannot rest in any theory of this wondrous universe, which does not place an omnipotent moral intelligence first in the absolute order of existence, as the efficient cause of all forces, whether chemical, mechanical, vital or mental" (p. 148).

The Heroic Enthusiasts (*Gli Eroici Furori*). An Ethical Poem by Giordano Bruno. Part the First. Translated by L. Williams. With an Introduction compiled chiefly from David Levi's *Giordano Bruno o la Religione del Pensiero*. London: George Redway, 1887. Pp. 170.

This is a most unfortunate attempt at translation of the first five

dialogues of the *Eroici Furori* of Giordano Bruno, preceded by an introductory sketch of the philosopher's life, which seems to be for the most part translated from the source mentioned on the title-page. To say that the translation of Bruno is full of blunders gives a very imperfect idea of its inaccuracy, which is not merely casual but affects the whole structure. This, for example, is the version that is given of a passage of fundamental importance in the second dialogue. "CICADA. So that we can never hold the proposition of being contented or discontented, without holding the proposition of our own foolishness, which we thereby confess; therefore, no one who reasons, and consequently no one who participates, can be wise; in short, all men are fools. TANSILLO. I do not intend to infer that; for I will hold of highest wisdom him who could really say at one time the opposite of what he says at another — never was I less gay than now; or, never was I less sad than at present" (pp. 57-8). The doctrine that Bruno is here expounding is that virtue or wisdom consists in a state of indifference as regards the two contrary extremes of joy and sorrow. The expression translated to "hold the proposition of being contented or discontented" (tener proposito d'esser contenti o mal contenti), means simply to talk of being "contented or discontented". "No one who reasons, and consequently no one who participates," ought to be "no one who speaks of it (that is, of being sad or joyful), and consequently no one who participates in it (that is, in the extreme of sorrow or joy)". "He who could really say at one time the opposite of what he says at another," ought to be "he who could truly say sometime the opposite of what that other person said" (who had once declared that he was never so happy as at the present moment). "Foolish" and "foolishness" ought rather to be "mad" and "madness". A passage below, which is of equally fundamental importance for the understanding of the whole book, is perverted into the following extraordinary sentence :— "This, then, to return to the point, is how this enthusiastic hero, who explains himself in the present part, is different from the other baser ones—not as virtue from vice, but as a vice which exists in a subject more divine or divinely, from a vice which exists in a subject more savage or savagely; so that the difference is according to the different subjects and modes, and not according to the form of vice" (p. 59). Bruno's point here is that "the heroic enthuisasm which is explained in the present part" (questo eroico furore che si chiarisce nella presente parte), is formally a "vice," a kind of "madness" (pazzia), since the heroic enthusiast, the seeker of absolute knowledge, fluctuates between the extremes of joy and sorrow, and does not remain poised at the centre of indifference like the wise or virtuous man; but that this "vice" differs from others in that its "subjects and modes" (that is, the persons who display it, and its modes of appearing) are nobler or more divine than the subjects and modes of "vulgar" or "bestial" joys and sorrows, though it is not different as regards the mere formal character of being a vice (secondo la forma dell' esser vizio). When passages expressing the central ideas of the book are "translated" in the way that has been seen, it is not worth while to give specimens of mistranslations of single phrases, though there are many quite equal to the rendering of "eroico furore" by "enthusiastic hero".

Hegel's Philosophy of the State and of History. An Exposition by GEORGE S. MORRIS, Professor of Philosophy in the University of Michigan. ("Griggs's Philosophical Classics," No. 6.) Chicago: S. C. Griggs & Co., 1887. Pp. xiii., 306.

The editor of this workmanlike (American) series of volumes "devoted

to a critical exposition of the masterpieces of German thought," makes here his own second contribution to it. From Kant's chief work, with which the series was inaugurated (see MIND vii. 604), he passes now to give account of Hegel's *Philosophie des Rechts* (pp. 1-110), and *Philosophie der Geschichte* (pp. 111-336). Where there was so much to report (a good deal of it, incidentally, in actual translation of Hegel's own words), it has not been found possible to include much comment or criticism. The work appears to be done in a spirited as well as accurate fashion. Coming from so trained a hand, it is not the less to be welcomed because already there happens to be a full English translation of the *Phil. d. Gesch.* Opportunity may, it is hoped, be found later on for some estimate of the contents of the volume.

The Elements of Psychology: A Text-Book. By DAVID J. HILL, LL.D., President of Bucknell University, &c. With illustrative Figures. New York and Chicago: Sheldon & Co., 1888. Pp. xxvi., 419.

This text-book "has grown up in the author's class-room during a period of nearly ten years, and has been gradually adapted to the practical needs of those who could devote to the study only a single term of three months". In this character it suggests comparison with Prof. Dewey's *Psychology* (see MIND xii. 439), addressed about a year ago to the same class of students. That book was marked by a freshness and originality of treatment that excited doubts only as to its appropriateness for the purpose of elementary instruction. The present author, who has written other text-books for students, shows himself in divers ways (including the use of a great variety of types) a good deal more alive to the object immediately in view; and if he also, in that view, departs less from the beaten track of exposition, he is not without his justification. His plan seems to be that of trying to work the latest results of scientific inquiry into a scheme of 'faculty'-psychology framed on the general lines of Hamilton's. It is not an easy task, and the 'fit' cannot be called very exact. Perhaps it would have fared better with the digestion of the "three-months"-student if there had been rather less effort to give him a taste of everything and of everybody. Yet it is impossible not to be struck by the author's comprehensiveness of statement on all topics, and by his carefully considered way of inweaving so many and manifold references with his text; the result being an exceptionally full book for its size. In the actual exposition, it is to be remarked that, after short Introduction (pp. 1-10) of a very general character, Intellect, begun immediately, is not allowed much more than the space given to Sensibility (taken in its old wider meaning) and Will. These three names mark, in the author's view, "elemental *powers* of the soul," in correspondence with Knowledge, Feeling and Volition as the distinguishable "elemental *phenomena*" combined in actual experience. Under Will (pt. iii.), he is from the start anxious to contend for a region of fact to be studied only by "examination of consciousness," without yielding to the "temptation" of working into it "from the side of bodily manifestations," and the more because such method of approach must always, he thinks, prove vain. It seems a somewhat awkward proceeding, thereupon, to follow, *in* pt. iii., with a first long chapter of "Involuntary Action," including not only "motor mechanism" and "instinctive action," but also "acquired action" or "habit," some of which presupposes "will". Clearly from the author's point of view, or from any other, the bodily side of the case is not to be excluded. He is more consistent with himself in putting off to quite the end the question of "development of will"; but when he gives "attention, assent, choice,

execution" as its four stages in order, it is plain that he takes "development" in an unusual and peculiar sense. As to general position, while he professes (p. 2) to keep Psychology clear of Metaphysics, he might have more exactly defined the psychological bearing of those "primary affirmations" (of existence, co-existence, persistence) ascribed to the soul at p. 7, or of the sections on "being," &c., in the chapter of "Constitutive Knowledge". A very commendable feature of the text-book is the collection of figures at the end (pp. 377-403). Where reference to the nervous system, sense-organs, &c., is unavoidable, it should surely be rendered at least as definite as illustrations can make it; and there is no way of presenting them so unexceptionable as this upon which the author has fallen—massing them together, with appropriate verbal description, in an appendix.

Geulincx. Étude sur sa Vie, sa Philosophie et ses Ouvrages, par Victor Vander Haeghen, Docteur en Philosophie et Lettres, Docteur en Droit. Gand: Ad. Hoste, 1886. Pp. 231.

Within the last ten or fifteen years there has been an extraordinary revival of interest, especially among German writers, in the Flemish thinker whose name, before all others, is associated with the doctrine of Occasionalism developed within the Cartesian school. English readers have remained too long ignorant of the contributions (from the hands of Profs. E. Pfleiderer, Zeller and others) that have thus been made to a truer understanding of one of the most interesting episodes in the history of philosophy,—an episode that should have, indeed, a special interest for English readers, because of a certain marked affinity between at least part of the Occasionalistic doctrine and that Phenomenalistic theory of science which has got its most earnest expression from English thinkers of this century or before. The present monograph, to the production of which the recent German discussions have supplied the impulse, affords the best possible occasion for taking up the subject in these pages; and we hope to do so in an early No. The work of a fellow-countryman of Geulincx, it is of quite singular merit as a piece of research. Everything, apparently, that can now be learned concerning the ill-starred philosopher's life is here brought to light; and the bibliographical matter, especially hard of collection in Geulincx' case, is set out in a chapter that should henceforth be a model to all that have a like task in hand. The chapter follows, in a concluding section of "Geulingiana" (pp. 160-224), upon others that deal not less satisfactorily with what may be called the external relations of the philosopher's work; nor does the central division of the book (pp. 43-159), occupied with an exposition of the philosophy itself, come in any way short,—as will be seen when we return to it.

La Civilisation et la Croyance. Par Charles Secrétan, Professeur à l'Académie de Lausanne, Correspondant de l'Institut de France et de l'Institut genèvois. Paris: F. Alcan, 1887. Pp. 474.

In this work the author believes that he has been able to express all the "personal convictions on the generality of things" that he would wish to see shared. His object is, without erecting them into a system, to justify them philosophically, and at the same time to apply them to the social and religious questions of the day. He begins with a discussion of "The Situation," political and economical (Part i., pp. 15-148). The conclusion is that the essential question, for those who wish to prevent the collapse of civilisation, threatened by the tendency of modern democracy to socialism, is the moral question. What is necessary in

order that the light actually attainable with regard to political and economical questions should have its due effect is that the moral ideal of humanity should be realised in a greater number of individuals—not necessarily in all or even in a majority. This leads to the philosophical question, for the obstacle to the realisation of the moral ideal is, in the author's view, the prevalence of a false philosophy. In Part ii. ("The Problems of Philosophy," pp. 151-330) he sets forth the philosophical doctrines which, he holds, can alone give a secure basis for a morality that affirms the absolute obligation of duty. A brief account of the chief positions of M. Secrétan's philosophy will be found in a notice of his former work, *Le Principe de la Morale*, in MIND x. 618. Its central position is the doctrine of a "moral solidarity" of the human race depending on the real unity of substance of the species. The doctrines against which his attack is directed are, accordingly, "individualism, atomism, nominalism". These he connects with the prevalence of an empirical theory of knowledge. His own doctrine he identifies with a philosophical interpretation of Christian theology; seeking, at the same time, to make it independent of any particular view as to the historical basis of Christian dogma, and offering it for acceptance on purely philosophical grounds. The relation of philosophy to Christian theology is considered more closely in Part iii. ("Religion," pp. 333-454). Specifically, the connexion of M. Secrétan's philosophy with theology is in his theory of the moral solidarity of the race as taking the form of a common participation of mankind in a guilt that springs "from a deviation of which we rendered ourselves guilty in our original unity". A doctrine of the Fall of Man, he holds, follows directly from the postulation of Theism, Creation and Free-will, as these follow from the assertion of the primacy of the practical over the speculative reason. The idea of Creation may be combined with that of Evolution by means of the Aristotelian distinction of "possibility" from "actuality"; and the assertion of an Evolution is necessary in order to explain the real solidarity of all individuals. Christian morality is summed up in the words "love and justice"—neither of them in separation, but both as implying one another. Its practical manifestation is not to be sought in historical Christianity. The cause that the author has wished to serve, he says in concluding, "is not a return to the past; it is the advent of a new era; it is Christianity in spirit and in truth, which has always subsisted in some souls and which has never reigned".

La Méthode Conscientielle. Essai de Philosophie Exactiviste. Par LÉON DE ROSNY. Paris: F. Alcan, 1887. Pp. xiv., 180.

This essay is divided into twelve chapters, bearing the following titles:—"Du Critérium scientifique et de la mesure dans laquelle peut être acquise la Certitude"; "Positivisme et Exactivisme"; "De la Nature universelle"; "Des Forces morales cosmiques"; "L'Instinct et la Révélation intime"; "De la Liberté et des Idées préconçues"; "De l'Observation et de l'Expérience"; "Lois et Manifestations"; "Conventions et Hypothèses"; "Les Systématisations inévitables"; "De la Morale absolue"; "De l'Hygiène intellectuelle". The author's ideas about method—accurate observation of the facts of nature and examination of consciousness—are less distinctive than his theory of the world as an organism having perfection for its end; the duty of man being to help to realise this perfection by "collaborating at the great work of universal Nature". In chapters vi. and xii. there are rather interesting defences of paradoxes. A couple of sentences may be quoted from each. "La guerre aux idées préconçues,—quand cette guerre n'est pas la résul-

tante de la paresse ou d'un ramolissement du cerveau,—est presque toujours une œuvre d'hypocrisie. Il ne s'est jamais produit de grande doctrine dans le monde sans qu'une idée préconçue n'en ait fourni le germe, n'est servi à son incubation, n'ait présidé à sa naissance, et ne se soit ensuite tenue en éveil sur les bords de son berceau" (p. 69). "La santé du corps, souvent nécessaire à l'émission de la pensée, n'est cependant pas suffisante pour garantir à celle-ci toute la portée qu'elle est susceptible d'atteindre; et, dans plus d'un cas, on pourrait contredire avec justesse l'aphorisme bien connu, tiré de Juvénal, en soutenant qu'il arrive de rencontrer une *mens sana in corpore insano*. La pléthore de la santé ne contribue pas toujours à l'activité de l'esprit" (p. 162).

La Conscience Psychologique et Morale dans l'Individu et dans l'Histoire. Par Ludovic Carrau, Directeur des Conférences de Philosophie à la Sorbonne. Paris: Perrin, 1887. Pp. viii., 290.

This volume, by the translator of Prof. Flint's *Philosophy of History in France and Germany*, consists of chapters on the following subjects: (1) "Les origines de la conscience, de la pensée et de la volonté, selon G. H. Lewes," (2) "La folie au point de vue psychologique," (3) "La responsabilité morale dans certains états analogues à la folie et chez les criminels," (4) "L'humanité primitive et l'évolution sociale, selon M. Herbert Spencer," (5) "La philosophie de l'histoire et la loi du progrès," (6) "L'évolution de la morale—La moralité chez les sauvages". All are interestingly written expositions of the theories of recent thinkers. The criticism is from the point of view of the Spiritualist school.

La Philosophie Religieuse en Angleterre depuis Locke jusqu' à nos Jours. Par Ludovic Carrau, Directeur des Conférences de Philosophie à la Faculté des Lettres de Paris. Paris: F. Alcan, 1888. Pp. vii., 295.

This second volume by the same author has the merits of the first. It consists of expositions, together with criticism, of the religious philosophy of Berkeley, Butler, Bolingbroke, Hume, Hamilton, J. S. Mill, Mr. Spencer and Dr. F. E. Abbot. The chapter on Bolingbroke contains also a brief sketch of the history of English Deism. Two chapters (pp. 29-63) are devoted to Butler,—the first to his Ethics, the second to the *Analogy*. In a concluding chapter (pp. 270-95) the author contends that, after all the criticism it has undergone, the argument of Anselm and Descartes from the idea to the existence of a perfect being still retains its validity. M. Carrau's volume, it may be mentioned, is intended as a continuation of De Rémusat's *Histoire de la Philosophie en Angleterre depuis Bacon jusqu' à Locke* (see Mind iv. 128).

L'Intelligence des Animaux. Par G. J. Romanes. Précédée d'une Préface sur l'Evolution mentale par Edm. Perrier, Professeur au Muséum d'Histoire Naturelle de Paris. 2 Tomes. Paris: F. Alcan, 1887. Pp. xl., 230; 254.

This translation of Mr. Romanes's *Animal Intelligence* is preceded by an interesting preface giving a sketch of modern theories of instinct from Descartes to Darwin. M. Perrier himself advocates a theory which, while taking from Mr. Spencer the position that "reflexes are the point of departure of all mental evolution," and not excluding reference to natural selection as the means by which instincts are preserved, regards intelligence as a necessary factor in their modification. In his own words: "Cette théorie prend pour point de départ les réflexes; elle admet la constitution, grâce à ces phénomènes inconscients, d'une première catégorie d'instincts; à la suite du développement de la con-

science, l'intelligence intervient pour modifier ces instincts; mais son rôle est momentané; l'instinct modifié par elle se transmet intégralement par hérédité et peut s'exercer désormais, sans que son intervention soit nécessaire; enfin, la conscience se développant et avec elle la mémoire, l'intelligence, d'abord dominée par l'instinct, reprend le dessus et le masque d'une manière plus ou moins complète". He seeks to apply this theory to insects by supposing a change in their manner of life, due to change of climatic conditions, from the time when their instincts were first formed.

L'Education Morale dès le Berceau. Essai de Psychologie appliquée. Par Bernard Perez. Deuxième Edition entièrement refondue. Paris: F. Alcan, 1888. Pp. xxiv., 320.

This second edition of M. Perez's work, reviewed in Mind vi. 281, is very much altered from its original form, being, indeed, as the author says, "in many respects a new book". The first part ("Premiers développements et formation morale de la volonté," pp. 1-110) "owes almost nothing to the preceding edition". "Cette partie de mon étude," the author proceeds, "fait, d'ailleurs, une sorte de préparation générale à la culture des sens et des émotions, instruments et objets de discipline morale. Mon traité d'éducation morale, qui est souvent de la morale en action, a ainsi gagné en cohérence, en unité, et peut-être aussi en clarté. Les préceptes forcément épars s'y rattachent comme à un centre naturel." A feature of this new first part, as of the book in general, is the utilisation of the psychological work that has been done since the original appearance of the book. M. Ribot's monographs, for example, are frequently cited. The chief alterations in the way of omission are the suppression of the chapter on æsthetics (utilised in the third edition of *Les trois premières Années de l'Enfant*) and of the chapter on "Le sens naturaliste". The last is omitted as being "a metaphysical digression"; it having been the author's desire to make the book practical all through, and to avoid *all* controversial matter. This seems to be in part what has determined him to omit the æsthetic chapter, some controversial points of which were remarked on by his reviewer in Mind. "L'influence directe du sentiment esthétique sur les émotions et les habitudes morales," he says, "se produit pour le mal comme pour le bien. Quant au caractère moral que peut revêtir lui-même le sentiment esthétique, outre que la question est bien controversée, l'inconvénient était inévitable, dans un livre comme celui-ci, de dire là-dessus trop ou trop peu."

Philosophie des Schönen. Von Eduard von Hartmann. Zweiter systematischer Theil der '*Æsthetik*'. 8 Lieferungen. Berlin: C. Duncker (C. Heymons), 1887. Pp. xv., 836.

Von Hartmann's History of German Æsthetics since Kant, the appearance of which was noted in Mind xii. 308, is now completed by the promised systematic Treatise (which forms parts 13-20 of the cheap edition of the "Selected Works"). The principal divisions of the new work are as follows:—Book i. "The Conception of the Beautiful." (1) "The Æsthetic Phenomenon (Schein) and its Ingredients." (2) "The Concretion-Stages of the Beautiful." (3) "The Contraries of the Beautiful." (4, 5) "The Modifications of the Beautiful" (with and without "Conflict"). (6) "The Place of the Beautiful in the Life of the Human Spirit and in the World-All." Book ii. "The Beautiful as Existing." (7) "The Beautiful in Nature and History." (8) "The Origin of Artistic Beauty." (9) "The Non-independent Arts of Formal Beauty and the Unfree Arts." (10) "The Simple Free Arts." (11)

"The Composite Arts." With omission of everything that relates to the classification of the particular arts, the following may be presented as a sketch of the author's general principles and results. He begins with a refutation of two opposite errors as to the nature of beauty—"the naïvely realistic error that beauty has its seat in things-in-themselves" and "the subjectively idealistic error" which suppresses "the moment of objectivity," of being beautiful for all persons, as the first suppresses "the moment of subjectivity," of being beautiful only for subjective appearance. His own position is that the work of art is "objectively real," but that only its effect, the subjective appearance in the mind of the artist or of another person, is "beautiful". "The cause of the beauty of the image in the perception of the beautiful is only in the thing-in-itself, which is not beautiful; and in all production of beauty it appertains to the artist to create things-in-themselves which, although not themselves beautiful, yet necessarily become causes of beautiful images in normally organised men." This position is that of "Transcendental Realism". The distinction of the æsthetic relation in the subjective appearance from the theoretical and practical relations is that it "completely abstracts from the trans-subjective reality which lies causally at the ground of the subjective phenomenon, and is satisfied by the appearance as such so far as it is only beautiful," while the theoretical and practical relations "are not interested in the appearance (Schein) as such, but only trouble themselves about it in so far as it forms the bridge of union with the trans-subjective reality and functions as its representative in consciousness". At the same time, "the æsthetic appearance is *no illusion*, but ideal reality as actually present content of consciousness". When æstheticians say that art requires "Anschaulichkeit" as opposed to "Begrifflichkeit," they have something true in their minds, but express it falsely, putting the part for the whole; for "Anschaulichkeit" is only a character of some of the arts. That which constitutes the essential character of all is "Scheinhaftigkeit" or "Phenomenalität". "Bildlichkeit" also is no essential character of the beautiful. And again, as the term "æsthetic appearance" cannot be replaced by "intuition" or "image," so it cannot be replaced by "form" (as opposed to "content"); though the mode of expression that places beauty in form, rightly understood, may express the true conception. Not only is the "æsthetic appearance" set free from "the objective reality of things," but also from "the subjective reality of the beholder". That is to say, the reality of the subject as well as of the object is forgotten or absorbed in the "pure appearance". Beauty, thus understood, is regarded as revealing itself in a series of stages from "formal beauty" as "the pleasurable in sense," through formal beauty as manifested in mathematical, dynamical and "teleological" relations, in life and in the genus, to "concrete beauty" as realised in "the individual as microcosm". In the endeavour to represent the individual, is found the justification of the revolt against academical tradition when this has come to forbid the representation of everything but the abstract type. The terms "Realism" and "Naturalism" by which artistic revolutions sometimes try to justify themselves are thus only "masks" which the effort after "concrete individuality" as opposed to "abstract generality" puts on in a complete misunderstanding of its own true nature. "The individually beautiful work of art is not more beautiful than the generically beautiful work for this reason, because it corresponds better to nature and reality; but rather the reality of nature is more beautiful than the generically beautiful work of art because it responds better than this to the æsthetic demand for concrete individuality."

Finally, "the last and deepest thing in beauty is everywhere and at all stages a mystery". This mystery in beauty depends on the presence in the work of art of an "unconscious idea" immanent in the "æsthetic appearance" and not directly known but only felt. With the cessation of this mystery, with the becoming perfectly conscious of this unconscious idea, beauty would disappear.

Die Erkenntnistheorie der Stoa (Zweiter Band der '*Psychologie*'). Von Dr. Ludwig Stein, Privatdozent in Zürich. Vorangeht: "Umriss der Geschichte der griechischen Erkenntnistheorie bis auf Aristoteles". Berlin: S. Calvary & Co., 1888. Pp. 389.

Dr. Stein here continues his monograph on the Stoic Psychology—of which the first volume was noticed in Mind xi. 594—by a second volume dealing with the Theory of Knowledge of the Stoics and their predecessors. A third volume, on the Stoic doctrine of the Passions, which is to be accompanied by a general Index, will complete the work. The whole monograph promises to be of standard importance. In the present volume a preliminary account is first given of the development of Theory of Knowledge from the beginning of Greek philosophy to Aristotle (pp. 1-85). The fragmentary suggestions of the philosophers of the "pre-Sophistic" period are carefully brought into view; but at the same time it is insisted that the earlier "doctrines of knowledge" do not indicate grasp of the "problem of knowledge" as a whole; being always buttresses of a doctrine already completed, instead of foundations for the construction of a doctrine. After the Sophists and Socrates, all philosophy was necessarily based on a more or less systematic theory of knowledge; and this had its definite place assigned to it by Aristotle. Theory of knowledge has in the Stoic system the place which it has in modern philosophy and which really belongs to it, *viz.*, that of "a propædeutic foundation of the whole of philosophy". More specially, it is conceived as a kind of psychological introduction to formal logic (p. 103). The Stoic theory of knowledge as it proceeded from Zeno was essentially empirical and nominalistic, and such it remained to the end, in spite of a leaning to rationalism on the part of some chiefs of the school. While much more finely articulated, it was in agreement as regards fundamentals with the Epicurean theory of knowledge; the metaphysical opponents the Stoics had in view being always the Sceptics. Without breaking with empiricism, however, the Stoics were able to find a place in their system for doctrines that appear to be distinctively rationalistic. Stoicism is throughout, Dr. Stein contends, "a great effort at reconciliation between opposing views in philosophy and life" (p. 142). Its effort at reconciliation of opposing empirical and rationalistic positions was identical in spirit with that of Leibniz (pp. 240-2 n.). Its own criterion of truth, however, in spite of the use made of "common notions," &c., remains always the φαντασία καταληπτική, and this, in the last resort, in an empirical sense. In some very interesting notes, Dr. Stein tries to prove a direct influence of Stoic ideas on Hobbes and Locke (pp. 117-19, 145-6, &c.). Alike during the Scholastic period and at the beginning of modern philosophy, no theory of knowledge, he finds, was so influential (beside those of Plato and Aristotle) as that of Stoicism. Of special interest for the author is the Stoic doctrine of συγκατάθεσις, which he explains as "judgment (κρίσις) united with approval". This term was chosen, he contends, instead of κρίσις, in conscious opposition to the sceptical ἐποχή, for the sake of its implication of will as having part in intellectual assent. It is the starting-point in the reconciliation of determinism and free-will

attempted by Cleanthes. This reconciliation reappears, either independently or under indirect Stoical influences, in both mediæval and modern philosophy,—in the Arabian school of the "Ascharija" (a subject of the author's special study) and in the Occasionalist school. Freedom, according to this view, consists in a joyous acquiescence, which the mind has the power to give or to withhold, in an inevitable judgment or act (pp. 191-5, notes 383-4). A feature of this, as of Dr. Stein's first, volume is the separate study of the chiefs of Stoicism. After the treatment of the doctrines of the school as a whole in nine chapters (pp. 89-300, "The Place of Theory of Knowledge," "The ἡγεμονικόν or Thinking Soul," "Perception," "Representation," "The Judgment," "Reason," "General Conceptions," "The Criterion of Truth," "Language—Nominalism"), there follow chapters treating of the doctrines of Zeno, Cleanthes, Chrysippus, "The Middle Stoa," Seneca, Epictetus and Marcus Aurelius (pp. 300-87). The purpose of this "genetic" study is to show the effect of controversy in modifying the expression of particular doctrines, and at the same time to make it clear that the groundwork of the system remains unmodified till the dissolution of the school.

Louis de la Forge u. seine Stellung im Occasionalismus. Ein Beitrag zur Geschichte der Philosophie von Dr. HEINRICH SEYFARTH. Gotha: E. Behrend, 1887. Pp. 59.

This is a still later contribution than the monograph on Geulincx noted above (p. 298) to a right appreciation of the Occasionalist theory. It is specially concerned with a thinker of considerable prominence in his time, who has now become little more than a name. Born at Paris, early in the 17th century, practising medicine at Saumur, and becoming the friend and adherent of Descartes, De la Forge not only took part in the posthumous publication of the philosopher's *Traité de l'Homme*, but himself wrote an elaborate *Traité de l'Ame humaine* on Cartesian principles. There is a dispute as to the date of the original issue of this work, some carrying it forward from 1661 to 1666, while Dr. Seyfarth would place it (for reason given) in 1665, the year in which the first (incomplete) edition of Geulincx' *Ethica* appeared. The point has its interest in relation to the question of when or at whose hands the doctrine of Occasionalism first took shape. It is more important to note that, whether De la Forge came earlier or later than Geulincx before the world with his statement of the doctrine, it was unquestionably thought out by him in perfect independence, and with a breadth of view and a logical pertinacity hardly second to what the Flemish thinker displayed. In any attempt to understand Occasionalism, in relation to the Cartesian principles from which it so directly followed, it is therefore right and necessary not to overlook De la Forge's part in its development; and, in returning to the subject later on, we shall have more to say on Dr. Seyfarth's welcome and effective essay.

Ueber Gemüthsbewegungen. Eine psycho-physiologische Studie von Dr. C. LANGE, Professor der Medicin in Kopenhagen. Autorisirte Uebersetzung von Dr. H. KURELLA, Prakt. Arzt. Leipzig: Theodor Thomas, 1887. Pp. 92.

This is a translation of the work of a distinguished Danish pathologist on the Emotions, published originally at the beginning of 1885. The author lays down the principle, for the study of emotion, that the bodily, physiological expressions of the movements of feeling furnish the only point of support for their scientific investigation (p. 8). He only deals with certain selected emotions—the chief of which are Sorrow, Joy,

Fear and Anger (Kummer, Freude, Furcht, Zorn)—and with these under their typical and, as he says, "conventional" expression. The descriptive part of his essay is preliminary to a physiological theory of the emotions, the distinctive feature of which is that all are reduced to vaso-motor phenomena. First it is found that the chief emotions dealt with form contrasting pairs in respect of their physiological, and in particular their vaso-motor, effects. The conjecture is then thrown out that these latter effects are primary and the others derived, and the facts are found to be all explicable on this supposition. The ordinary mode of speech that makes emotions the "causes" of their physiological accompaniments is then criticised. In the order of events, the author concludes, the relation that really exists is the inverse of that which is ordinarily assumed and which he himself had assumed provisionally. The mental emotion is not the cause of the accompanying vaso-motor phenomena, but these are the effects of physical causes, to which "psychical causes" admit of reduction. In their essential character the phenomena of emotion are the same whether their cause is "physical" or "psychical" (*e.g.*, a toxic agent or an association of present with past events); and, in their strictly scientific expression they must be identified with their physiological, that is, ultimately with their vaso-motor, accompaniments. The scientific problem of the psychology of the emotions is to determine the reaction of the vaso-motor system on different influences. Its solution, the author admits, is as yet far distant. The aim of the present investigation is merely to fix the problem. In a note (n. 22, pp. 88-90) Dr. Lange points out an interesting anticipation of his vaso-motor theory by Malebranche. He has a reference to Darwin's *Expression of the Emotions* (n. 16, p. 86), bringing against the evolutionary view of physiognomical expression an objection similar to Prof. Mosso's (see MIND x. 619), and claiming exclusive validity for "physiological analysis".

Das menschliche Erkennen. Grundlinien der Erkenntnisstheorie und Metaphysik. Von A. DORNER, Doctor der Theologie und Philosophie. Berlin: H. Reuther, 1887. Pp. iv., 512.

This book is divided, after an introductory section (pp. 1-39) on the claims of Dogmatism, Scepticism, Criticism, "Apriorism," and Empiricism, into two parts, consisting respectively of "Investigations in Theory of Knowledge" (pp. 39-352) and "Metaphysical Investigations" (pp. 352-512). The subdivisions of part i. are as follows:—(1) Sensible Experience, (2) Representation and Concept (Judgment and Syllogism), (3) The Concepts bound up with Judgments of Worth (Concepts formed in connexion with feelings of pleasure and pain; æsthetic, ethical, and religious concepts), (4) Ideals and Categories, (5) Methodological Discussions. The author having decided for the Critical as opposed to the Dogmatic and Sceptical positions, tries to establish, on Critical grounds, a doctrine that is neither pure Empiricism nor pure "Apriorism". Empirical and *a priori* elements are to be recognised as existing together in all knowledge. To the power of knowing there are objects that correspond. That which knows is a substantial soul. Except on these suppositions, knowledge is inexplicable. The metaphysical theory developed in the second part claims to unite the conception of "immanence" with that of "transcendence," and the conception of "teleological" with that of "mechanical" evolution. "The highest metaphysical power in the world," according to this doctrine, is "the ethical, intelligent will of the Spirit," which, by modifying the mechanical interaction of the parts of the world, brings its order to perfection. At the beginning of evolution,

mechanism preponderates; at its end, "teleological organisation" will be universal. Mechanism is the conservative principle, teleology the principle of progress. The whole "world-process," whether divisible into "aeons" or not, is one and continually progressive. The ground of its unity is the unity of the "world-cause". So far as teleological organisation is realised in individual beings, it is effected by "central substances," gathering round them in the proper order groups of interacting atoms.

Das Wesen der Seele und die Natur der geistigen Vorgänge im Lichte der Philosophie seit Kant und ihrer grundlegenden Theorien historisch-kritisch dargestellt von Dr. J. H. Witte, Professor an der Universität in Bonn. Halle-Saale: C. E. M. Pfeffer (R. Stricker), 1888. Pp. xvi., 336.

Regarding the problem of "the nature of the soul" as fundamental not only for philosophy but also for scientific psychology, the author has set himself to examine all the more important theories of the soul since Kant, in relation to the general doctrines of the thinkers by whom they have been put forth, and with a view to arriving at a valid theory. The book will receive 'Critical Notice' later on.

Die Welt in ihren Spiegelungen unter dem Wandel des Völkergedankens. Prolegomena zu einer Gedankenstatistik. Von Adolf Bastian. Berlin: E. S. Mittler & Sohn, 1887. Pp. xxviii., 480.

Ethnologisches Bilderbuch mit erklärendem Text. 25 Tafeln, davon 6 in Farbendruck, 3 in Lichtdruck. Zugleich als Illustrationen beigegeben zu dem Werke '*Die Welt in ihren Spiegelungen, &c.*'. Same Author, &c.

In his present work, the author applies his conception of a psychology of national and race-ideas specially to the region of cosmology; describing, by his characteristic method, the forms that the common thought of peoples has taken in their beliefs about the constitution of the world. The accompanying atlas (with special explanatory text) gives a series of carefully selected and well executed plates—some reproducing actual works of art, others (apparently) constructed from verbal description: altogether, a very instructive collection. The author's study of the cosmological ideas of historical civilisations, as expressed in their religious systems, ranges, literally, "from China to Peru," and, in addition, he takes in the ideas of early Greek philosophers, of Gnostics and Cabbalists and of mediæval geographers, as well as of Polynesians and Maoris. The whole work is not less remarkable than his previous ones for its varied learning, and is equally inspired by his theoretical idea, expounded on so many other occasions, of an "objective" or ethnic psychology.

Zur neuen Lehre. Betrachtungen von Dr. H. Druskowitz. Heidelberg: G. Weiss, 1888. Pp. 53.

This is a sequel to the author's essay noticed in Mind xi. 589. He both continues his examination of doctrines that claim to replace the historical religions and seeks to formulate more accurately the conditions of a satisfactory "substitute for religion". For himself, he finds satisfaction "in the idea of an immeasurable capability of progress, and of a grand end, a victorious conclusion of the ascending planetary development," towards which man is to contribute, not for the sake of his "greatest happiness," but for the sake of a "higher order, of which he is the forerunner".

Werden, Sein und Erscheinungsweise des Bewusstseins. Von Dr. med. Emanuel Jaesche. Heidelberg: G. Weiss, 1887. Pp. 80.

This is an essay having for its general purpose to bring into view the unity of knowledge as displayed in the series of the sciences from those that deal with "corporeal things," "animated creatures" and "conscious creatures," to those that deal with "self-conscious creatures". The author has developed his idea at greater length in a book, *Das Grundgesetz der Wissenschaft*, noticed in Mind xi. 136.

Grundzüge der Physiologischen Psychologie. Von Wilhelm Wundt, Professor an der Universität zu Leipzig. Dritte umgearbeitete Auflage. 2 Bände. Leipzig: W. Engelmann, 1887. Pp. xii., 544; x., 562.

This third edition of Prof. Wundt's standard work has been throughout revised and to a large extent rewritten. The subjects of the sections and chapters are the same as in the second edition (published in 1880), but the text is largely altered and much is altogether new. Vol. i. has been extended 45; vol. ii., 92 pages. In view of the sweeping alterations and additions now made, 'Critical Notice' will follow.

Received also:—

J. Drummond, *Philo Judaeus*, 2 vols., Lond., Williams & Norgate, pp. 359, 355.

J. Rhys, *Hibbert Lectures on Celtic Heathendom*, Lond., Williams & Norgate, pp. 708.

H. C. Bastian, *On different Kinds of Aphasia*, Lond., Brit. Med. Assoc., pp. 28.

N. Vaithianathen, *Some Observations on Logic*, Madras, National Press, pp. 78.

G. T. Stevens, *Functional Nervous Diseases*, New York, D. Appleton, pp. 217.

Th. Piderit, *La Mimique et la Physiognomonie*, Paris, F. Alcan, pp. 280.

P. Aubry, *La Contagion du Meurtre*, Paris, F. Alcan, pp. 184.

O. K. Notovich, *La Liberté et la Volonté*, Paris, F. Alcan, pp. 256.

P. Regnaud, *Origine et Philosophie de Langage*, Paris, Fischbacher, pp. 443.

M. Panizza, *La Fisiologia del Sistema Nervoso*, 3a ed., Roma, Manzoni, pp. 441.

G. Cesca, *L'Educazione del Carattere*, Verona-Padova, Drucker e Tedeschi, pp. 26.

H. v. Eicken, *Gesch. u. System der mittelalt. Weltanschauung*, Stuttgart, Cotta, pp. 822.

A. Ganser, *Alles Reale Sein, &c.*, Graz, Leuschner u. Lubensky, pp. 27.

H. Ebbinghaus, *Die Gesetzmässigkeit des Helligkeitscontrastes*, Berlin, pp. 15.

F. Kirchner, *Schematismus der Philosophie*, Halle a. S., Schwetschke.

R. Eucken, *Die Einheit des Geisteslebens, &c.*, Leipzig, Veit, pp. 499.

C. Sigwart, *Die Impersonalien*, Freiburg i. B., J. C. B. Mohr, pp. 78.

E. Pfleiderer, *Zur Lösung der Platonischen Frage*, Fr. i. B., Mohr, pp. 116.

H. Münsterberg, *Die Willenshandlung*, Fr. i. B., Mohr, pp. 163.

G. Glogau, *Abriss der philosophischen Wissenschaften*, Bd. ii., Breslau, W. Koebner, pp. 417.

Notice will follow.

VIII.—NOTES.

DR. CATTELL ON "ELEMENTS OF PHYSIOLOGICAL PSYCHOLOGY".[1]

The generous praise which Dr. Cattell bestows in the October No. of MIND upon my *Elements of Physiological Psychology*, as a whole, receives my grateful recognition. Many of his criticisms of the details do not admit of reply by argument; for they concern matters like the amount of space, method of treatment, weight in evidence, to be assigned to particulars, and therefore raise such questions as every author must solve for himself in a practical way. For example, it may be open to debate, theoretically, whether a treatise aiming to cover the entire ground of physiological psychology in an elementary manner should devote any space to a description of the nervous system, and, if any, how much space it should thus devote. To such a question the reply must be: All depends upon what the author wishes to do. There can be little doubt that not one in a hundred of the readers of any work on this subject, even including the experts of different kinds, possesses, or can easily obtain, the material for forming that clear and symmetrical picture of the nervous mechanism which an understanding of its relations to the mind requires.

There is one class of Dr. Cattell's strictures, however, which appeal to me for a reply. His review is characterised by the frequent complaint of "confusion" in my treatment of individual topics. Now my own researches and reflections have been so elaborated, and my conclusions lie so clear in my own mind, that I am persuaded the appearance of confusion is due to some infelicity of expression on my part, or else the confusion is not *my* confusion. I wish, then, briefly to examine this class of Dr. Cattell's strictures.

In the first place, Dr. Cattell accuses me of confusion amounting to a "sheer contradiction," because I hold both that the nervous system must be considered as a mechanism and that there may be, and is, a causal connexion between this mechanism and the mind. In advocating the view that the nervous system is a mechanism, he is pleased to regard me as a "follower of Lotze". Now I can by no means claim so distinguished a title as this; but it seems rather strange that if I am to be regarded as a follower of the German philosopher in holding one of these tenets, I should not be regarded as equally his follower in holding the other tenet; for Lotze certainly advocated the view that the mind and the system of molecules which constitutes the central nervous mechanism are causally related to each other.

But in truth there is no incompatibility between these two tenets, and no confusion involved in holding them both. On the contrary, the marks of manifold confusion of the most antiquated kind are likely to become evident whenever anyone sets out to argue that there can be, or is, *no* causal relation between body and mind. It is then we hear the principles of a mediæval metaphysics virtually affirmed in the name of modern science. 'Only like can act on like;' no action is possible except through 'contact' of extended beings; the only causation is through the 'transmission' of so-called physical energy under the principle of mechanical equivalents, &c. These are some of the assumptions which

[1] This communication, which should have had immediate insertion, failed by accident to come to hand in time for the January No.—ED.

bring confusion into the treatment of this subject. But these are certainly not the assumptions which I advocate.

The interacting molecules of a living nervous system without doubt constitute a molecular mechanism. They are a system of moving material beings, which at every instant must be regarded as conditioning each other. But they certainly do not constitute a 'closed' system. If they did, there could be no such thing as 'irritating' or 'exciting' the system either by external or internal stimuli. A half-dozen perfectly elastic billiard-balls thrown down upon a table with perfectly elastic cushions would, in all their subsequent motions, constitute a physical mechanism. But what if any of the balls are from time to time struck by a cue? They do not for that reason cease to constitute a mechanism; but they do cease to constitute a 'closed' mechanical system. In other words, if we are to account for the behaviour of the balls, we have now to take the blows of the cue into the account. Neither does the effect of the many forms of constantly active stimuli, both internal and external, upon the nervous system render it any less a mechanism than it would be without this effect. It does, however, make it impossible to account for the action of this mechanism without taking the action of beings lying outside of it into our account.

And now the question arises: Is the nervous system a mechanism absolutely 'closed' to all causal action from the mind? Everything in the way of actually observed fact concerning the relations of the two kinds of phenomena—phenomena of the nervous system and mental phenomena—would encourage us to answer, No. But we are told, on the alleged authority of a certain form of a mechanical theory of the entire universe that, in spite of all appearances, we must answer, Yes. Why? I should be glad to know. Because action of mind on matter is mysterious, unimaginable, &c.? But so is every kind of action: action of material molecule on material molecule not the least so. Is it, then, because we must assume not only that all causal action is according to uniform modes or laws (which I readily grant), but also that all causal action is only between material molecules under the law of the conservation and correlation of physical energy? In other words, is it because the action of mind and brain on each other cannot be like the action of the billiard-balls under the stroke of the cue? But it seems to me that those who maintain the latter view may excuse us from assenting to them (under penalty, I suppose, of being found guilty of confusion), until it has been shown more clearly how the behaviour of the nervous mechanism under ordinary physical stimuli is to be expressed in terms of the action of the cue on the billiard-ball.

In brief, I do not for a moment admit that Dr. Cattell's charge of confusion is at this point well founded. There is no confusion or incompatibility between the view that the nervous system is a mechanism and the view that this system stands in certain causal relations to the mind. Confusion arises, and that without easily assignable limit, when the attempt is made to explain all the uniformities of the occurrence of phenomena, mental as well as physical, as mere resultants of the causal action of physical elements under the law of the conservation and correlation of physical energy. But this is not merely a mechanical theory of the nervous system. It is the materialistic theory of the relations of mental phenomena to that system. The latter theory should never be confused with the former. I cannot believe that my book has fallen into this confusion.

In this connexion I may, perhaps, best refer to the surprise which Dr. Cattell expresses at the sentence in which I do not, as he says,

"define" energy, but simply state what we seem compelled to understand by it—*viz.*, "that which moves or tends to move the elementary atoms, or their aggregations into molecules and masses". Possibly, if I (as here) remove the comma which the printers slipped in between the word "aggregations" and the word "into," Dr. Cattell will remove the exclamation-point which he placed after the entire sentence.

Dr. Cattell also finds fault for its confusion with my theory of perception. Its "fallacy" consists, he thinks, in holding to "the assumption of a mind with a mysterious power of creating unity of consciousness out of sensation-atoms". This is not at all the way in which I should consent to have my view expressed. And here again any confusion which may possibly be pointed out in such a view is not my confusion. I am what Prof. James called, in the October No. of MIND, a "psychical stimulist," as regards the origin of space-perceptions. That is, I hold that the space-form which objects of sense certainly have is *not* the result of a mere summation (whether by addition or multiplication, to use Dr. Cattell's misleading figure; since what is multiplication but a form of addition?) of non-spatial sensational elements. At the same tume, I also hold that experimental analysis shows conclusively that many, if not all, of the sensational elements which enter into the presentations of sense do not originally possess the spatial quality which the results of their synthesis (the presentations of sense) certainly have. Therefore, I have argued, these spatial qualities are the results of the synthetic reaction of mind, according to its own laws of behaviour. Now Dr. Cattell may not accept or like this theory of perception; but I do not understand how he can rightly speak of it as necessarily fallacious or confused. As Prof. James shows in the article already referred to, such is virtually the view arrived at by far the greater majority of all investigators of sense-perception, whether they start from the philosophical or the experimental point of view. And I would undertake to show that Prof. James, with all the room he leaves to be filled by the mental acts of "identification," "summation," "imagination," "correction," &c., is something of a "psychical stimulist" himself.

Again, Dr. Cattell (very inconsiderately, I think) accuses me of "confusion amounting almost to contradiction" because, in one place (p. 391), I state the simple fact that objects of sense appear before the mind as *out* and *spread-out*, and in another place (p. 455) declare that this does not happen by way of copying off ready-made things which exist *extra-mentally* just as they are afterwards perceived. But all this amounts to saying that the objects of sense are *mental* constructions,—a statement which Dr. Cattell seems to approve. Since they *are* mental constructions, the qualities of being 'out' and 'spread-out' are not copied off from extra-mental things, but are imparted to the objects as the form in which the mind constructs them. Once more, I do not object to Dr. Cattell's holding any other view of perception which he thinks himself competent to defend; but I by no means confess to his charge of confusion and contradiction.

Dr. Cattell reiterates this charge of confusion against the chapter of my book on Feelings and Bodily Motions, although he is kind enough to say that the chapter was "evidently written with extensive knowledge of the German and English literature concerned with the subject". He gives to me, as well as to his other readers, scarcely any token, however, as to what this confusion consists in. All I can gather is that I am judged to have fallen again into my sad habit of getting confused, because I speak of "feeling with its colour-tone of pain or pleasure," and of an "involuntary act of will". As to the first point, I can only conjecture

that Dr. Cattell may be a follower of Herbart in his own theory of feeling. But certainly I have clearly, though briefly, pointed out the confusion of the whole subject in which the Herbartian theory involves us. As to the propriety of speaking of "an involuntary act of will" I have myself expressed doubt, but have consented to use the term, for want of a better, to indicate those "forced" acts of attention with which physiological psychology is so familiar.

Another instance of the facility with which Dr. Cattell discovers obscurities, and so feels impelled to dissent from its views, I find in his statement that my book holds the classification of tastes to be an easy matter. But, says Dr. Cattell, "no combination of sweet, sour, bitter and salt will give vanilla or chocolate, nor can the taste of lemon and sugar be analysed into sour + sweet". Now what the book says is this, that "most of the different kinds of tastes admit of being considered as compounds of a few simple sensations of this sense with each other and with sensations of smell, touch, common feeling and muscular sense" (p. 314). The ordinary classification I myself pronounce "loose," and I elsewhere (p. 354) hold that most of the complex tastes—strangely enough, instancing "chocolate" as one—cannot be wholly resolved into the simple kinds of gustatory sensations. Moreover, I also state that the modification of the acid of the lemon by the sugar is not a mere case of plus and minus, but that the explanation of the new sensation is in compound cerebral processes; the mixture takes place in the brain.

Dr. Cattell furthermore thinks that I have through several chapters confused the doctrine of the Specific Energy of the Nerves with the fact that nerves connect special sense-organs and muscles with special brain-centres. But again the confusion is not mine. The doctrine of the specific energy of the nerves I have stated, and touched upon in several places, but I believe always, with one exception, in such a way as to avoid all possibility of the confusion he finds. That one exception occurs in my summary of the conclusions respecting the localisation of cerebral function. There I say that all the results of investigation emphasise two great laws, one the law of Specific Energy and the other the law of Habit. It did not occur to me that any careful reader could suppose that in insisting upon the great and general principle of specific energy, as exemplified in the cerebral nervous mechanism, I should be thought of as confusing this use of the term with J. Müller's theory of "the specific energy of the nerves". It is perhaps worth notice in passing that Dr. Cattell thinks I am not justified in stating, and in italics: "*Sensibility seems, then, to be the predominating function of the right hemisphere, as motion is of the left*". He entirely overlooks the fact, however, that I am here giving a summary of Exner's conclusions.

Finally, Dr. Cattell more than intimates that, did he not refrain from discussing the more purely speculative part of my work, he should be compelled to point out other instances of confusion. I can only wish that, either by him or by some other critic, they might be brought to my notice. It might then appear whether the confusion is really mine or belongs to the false traditional opinions which are wont to be carried into the consideration of the relations between the body and the mind, and of the nature of the mind as made known through those relations.

My critic is good enough to apologise, apparently, for some of my failures by saying that the preparation of a book on physiological psychology is "a task of the utmost difficulty". This is indeed true. I make no claim to have overcome all the difficulties, or to have dealt with them successfully. But I feel confident that I have at least avoided being myself confused on the points regarding which Dr. Cattell

complains of my confusion. I will close by saying that, in my judgment. the greatest difficulty which physiological psychology has had to encounter hitherto consists in the fact that it has been, with few exceptions, pursued by students lacking in psychological insight and broad philosophical training.

GEORGE TRUMBULL LADD.

LEIBNIZ AND HOBBES.

The recent discovery in the University Library at Halle of a large number of letters from the unwearied hand of Leibniz—surely the most epistolary of all great thinkers—does not thus far prove to have much philosophical importance. Dr. L. Stein, editor of the new *Archiv für Gesch. der Phil.*, has in the first two numbers of that review given a careful account of all the autographic letters found, to the number of 101; and the utmost that can be said of them is that they help to deepen, if that were necessary, the impression of Leibniz as a man to whose breadth and variety of intellectual interests there was no bound, but who yet could pursue with the utmost tenacity special scientific objects of his own,—as here the perfecting of his reckoning-machine, entrusted, from about 1700 (long after its first invention), to a Helmstädt mathematical professor, R. C. Wagner, his chief correspondent in the collection. There is promise, indeed, that in the next number of the *Archiv* some other of the Halle letters—but these only copies, though not before published—will be made to yield matter of philosophical interest, as touching the question of the scope and value of history of philosophy. Meanwhile it may be noted that the discovery at Halle is not the only addition that has just been made to our knowledge of Leibniz' amazing activity as a letter-writer. There has recently appeared vol. iii. of the division given to 'Correspondence' in the stately collection of *Die philosophischen Schriften von G. W. Leibniz* (Berlin, Weidmann), made since 1875 by C. J. Gerhardt, editor before of *L.'s Mathematische Schriften*. This volume was kept back while vols. iv.-vi. of 'Works' were being issued from 1880. Apparently, though the editor says nothing, some kind of supplement must still be in view, outside of the original scheme; various things remaining unaccounted for within either division, as, for example, the well-known correspondence with Samuel Clarke. With all his merits and his unique claims to the gratitude of Leibniz-students, Gerhardt, it must be said, has not in all respects chosen the happiest way of presenting the fruits of his research; in particular, he might have been more forward with the reasons for some of his action in the past, and now he might have been less silent as to his actual intentions. There can, however, be no question as to the philosophical interest and value of the new, and hardly less of the corrected, matter which, in all his volumes (of 'Works' as well as 'Correspondence'), he has, with extraordinary labour, been able to bring forth from the recesses of the Royal Library at Hanover. In his latest volume—to go no farther back—at least one important interchange of letters (with Jacquelot, pp. 442-82) is made known for the first time; while other correspondences, more or less imperfectly printed before (some in merest fragment), are now set out with all desirable fulness and care. Among these are three: (1) with Thomas Burnett of Kemnay, a Scottish friend of Locke's; (2) with Cudworth's daughter, Lady Masham, the comforter of Locke's declining years; (3) with Pierre Coste, the French ranslator (in England) of Locke's *Essay*,—which throw so much new light on the relations of the German to the English philosopher that another

occasion may be sought for giving some detailed account of them in these pages. At present there is something to tell, from another source, of the relation in which Leibniz stood to an earlier English thinker—a relation that had not before been half carefully enough studied, and which, indeed, has been wholly overlooked by most expositors of Leibniz, including Mr. Theodore Merz, who, in his excellent contribution to "Blackwood's Philosophical Classics" (see MIND ix. 439), first set the great German fairly before English readers.

It is that earnest student of Hobbes, Dr. Ferdinand Tönnies, who, in a recent article in the *Philosophische Monatshefte* (xxiii. 557-73), has placed in a light as striking as it is new the intellectual debt of Leibniz to Hobbes. Leibniz, it may be well to remind the reader, was contemporary with Hobbes in the last third (1646-79) of the nonagenarian's life. It has long been known that the ardent young thinker, impressed at an early age by Hobbes among other of the new 'mechanical' philosophers, sought to enter into closer relations with him by a complimentary and interrogatory letter, written from Mainz in the year 1670. The letter was first printed, from a copy of it taken by Oldenburg through whom it was sent to Hobbes, in Guhrauer's biography of Leibniz, whence it passed without change into Gerhardt's vol. i., pp. 82-5 (having, by the way, its gist somewhat too loosely represented at p. 48). Now Dr. Tönnies has had the good fortune to find, in the same volume (4294) of Sl. MSS. in the British Museum with Oldenburg's copy (nearly correct in itself, but not always carefully followed by Guhrauer), a document that has all the appearance of being Leibniz' original letter. Of this he gives the first quite accurate transcript, appending to it a series of remarkably instructive "elucidations".

For the understanding of the development of Leibniz' thought—a subject of peculiar interest and difficulty—Dr. Tönnies's few pages make more really effective use than has yet been made of the rich material now rendered accessible by Gerhardt's diligence. It has recently been used, not without effect, by Dr. David Selver for two elaborate articles in the *Philosophische Studien* (iii. 217-63, 420-51, "Der Entwickelungsgang der Leibniz'schen Monadenlehre bis 1695"); but this careful writer, who ranges also over a wider field to good purpose, has overlooked, like others before him, the facts now discerned, with characteristic penetration, by Dr. Tönnies. When read in connexion with the various utterances in letters or other writings from 1663 which Dr. Tönnies has been the first to marshal, the letter of 1670 leaves it hardly doubtful that, up to this date at least, Leibniz was more deeply affected by Hobbes than by any other of the leading spirits of the new time. If as late as 1669 he could, in a letter to J. Thomasius, express a preference for the doctrine of Aristotle's *Physica* over that of Descartes' *Meditationes*, he cannot have been very familiar with this treatise, so purely philosophical in character as it is, and it may well be doubted, with Dr. Tönnies, whether he can by that time have read at all Descartes' chief work, the *Principia Philosophiæ*, which does contain a physical, as well as metaphysical, doctrine. To be sure, the letter of 1670 itself includes a very high-flown reference to the French philosopher, but there is every reason, notwithstanding, to believe that Leibniz' serious occupation with Descartes' philosophy followed upon the years from 1672 in which he gave himself with such ardour and brilliant success to the study of mathematics; as, probably, it then was from the sense of having so swiftly surpassed Descartes in mathematical discovery that he always continued more eager to accentuate their differences than their agreements in philosophy. On the other hand, we find him, by the year 1670,

not only conversant with Hobbes's thought at all its stages, whether of principle or application, but evidently concerned to get some accommodation of it to those practical interests of religion which were uppermost with him all through life. The time was near when he could not retain the faith he may have had even in the mathematical pretensions of the *De Corpore*, but, as Dr. Tönnies shows, other ideas, logical, metaphysical and even physical, plainly to be traced to that work, remained always operant with him. The most signal, undoubtedly, is that reference by Hobbes, in *De Corpore*, c. 25, § 5, to the possibility of regarding all bodies whatever as endued with sense in so far forth as reactive, though he himself proceeds to urge that it should be limited to living creatures, which do not simply react but have special organs for the retaining of impressed motion or—as he interprets this—have memory. Leibniz clearly has the passage in view when, in the letter of 1670, he goes so far beyond Hobbes (in the direction of Descartes) as to doubt whether sense can be more properly ascribed to brutes than "pain to boiling water". But already in the following year, as Dr. Tönnies points out, he is found harking back, in the tract *Theoria Motus Abstracti*, to a position which is essentially the same as Hobbes's, though he gives it an affirmative expression, peculiar to himself, which is of the utmost significance in view of the Monadism of later years. Two sentences may here be quoted: "Nullus conatus sine motu durat ultra momentum, præterquam in mentibus. . . . Omne enim corpus est mens momentanea, sed carens recordatione." It did not escape Leibniz' contemporaries whence he had got his inspiration; for Dr. Tönnies is able to cite the words of mournful reproach with which a forgotten G. Raphson, in controversy with Leibniz on the point, brings forward the very passage from Hobbes. Dr. Tönnies himself, in view of it, and in view of the farther development of Leibniz' thought that may now be referred definitely to 1678 (since publication by Gerhardt of his marginal notes written on Spinoza's *Ethica* in that year), does not hesitate to describe his metaphysical doctrine as, in strictness, "a Hobbism that had taken up Spinozism into it," or, again, to say: for Leibniz "Hobbism is the true physics; Spinozism, the true psychology". However this may be,—and certainly account has to be taken of a number of still later stages of development, at least in expression, before Leibniz, close upon the end of the century, had final possession of his doctrine,—enough should have been said to show that Dr. Tönnies has done a real service in drawing attention to an aspect of it that in recent times has not been at all regarded.

The letter to Hobbes (then 82) remained unanswered for all its compliments, which should not have been ungrateful to the old man amid so much hostile clamour as attended his closing years. Dr. Tönnies is doubtless right in ascribing to disappointment the petulant terms in which Leibniz, writing to Thomasius some months later in the same year, speaks, on Oldenburg's authority, of Hobbes as passing into second childhood. It must have been a transient shade of feeling, for some time later—apparently in 1672, from Paris—he began to address another letter of appreciative criticism to the aged thinker (given by Guhrauer and Gerhardt from the unfinished draft at Hanover). There is no evidence of their having met when Leibniz came over for some weeks to London, early in 1673; most probably, Hobbes was then in Derbyshire.

EDITOR.

"A SECOND LAURA BRIDGMAN."

The blind deaf-mute Laura Bridgman, now at the age of 58, has recently completed, amid due festal celebrations, the 50th year of her residence

in the Perkins Institution for the Blind, at Boston, U.S., where under the late Dr. S. G. Howe her education was planned and conducted with a skill and patience that have made it a psychological wonder. One of Dr. Howe's Reports on his achievement was given in MIND i. 263, and Prof. Stanley Hall followed it up in vol. iv. 149 with fuller details (many of them new) and a careful scientific appreciation of the case. It would be an omission, therefore, in these pages not to mention that a further valuable contribution has been made to our knowledge of Laura's powers. A pamphlet of 34 pp., bearing the title *The Writings of Laura Bridgman*, by E. C. Stanford, has been issued by "*The Overland Monthly* Publishing Co." of San Francisco, U.S., with date Jan. 22, 1887, appended to an introductory note by Prof. Stanley Hall, who had intended to give an account of "the writings" himself before deputing the task to one of his Johns Hopkins students: Mr. Stanford's account was apparently some little time before first published as a magazine-article in *The Overland Monthly*. "The writings are a journal, three autobiographical sketches, several so-called poems and numerous letters." Mr. Stanford gives specimens of them all, selected with skill and judgment, and supplies also a running psychological commentary of a high order. What stands out perhaps most clearly from the whole account is the remarkable vigour of intellect native to Laura; the implication, so far as psychological science is concerned, being that neither number nor variety of sense-experiences can account for intellectual development. That so much fulness and coherence of intellectual view (to say nothing of other phases of mental life) could be elaborated with such poverty of sense-materials was never made so clear before. But, as it happens, another case that may come to rival, if not surpass, Laura Bridgman's in interest and fame, has just begun to be made known through the same Institution at Boston, now under the charge of Dr. Howe's son-in-law, Dr. M. Anagnos. The following account, which appears to follow closely a Report recently issued by the Director, is taken *verbatim* from the American weekly journal *Science*, of Feb. 24.

"Helen Keller is the daughter of cultured and well-to-do parents, and was born in Alabama on June 27, 1880. When about nineteen months old, she was attacked violently with congestion of the stomach; and to the effects of this disease are referred her total loss of sight and hearing. Previously she is said to have been of perfect health, and unusually bright and active. She had learned to walk, and was fast learning to talk. The loss of her senses thus took place about seven months earlier than in the case of Laura Bridgman, though Helen seems to have been as much if not more developed at nineteen months than was the latter at twenty-six months. In both cases a slow recovery was made, and a painful inflammation of the eyes set in. It is recorded of Helen that she 'soon ceased to talk, because she had ceased to hear any sound'.

"As her strength returned, she gave ample evidence of the soundness of her mental faculties. She learned to distinguish the different members of her family and her friends, by feeling their features, and took an especial interest in the affairs of the household. The little hands were constantly busy in feeling objects and detecting the movements of those about her. She began to imitate these motions, and thus learned to express her wants and meaning by signs, to a remarkable degree. Just before completing her seventh year, a skilful teacher from the Perkins Institute—Miss Sullivan—was engaged for her. At this age Helen is described as a 'bright, active, well-grown girl,' 'quick and graceful in her movements, having fortunately not acquired any of those nervous habits so common among the blind. She has a merry laugh, and is fond of romping with other children. Indeed, she is never sad, but has

the gaiety which belong to her age and temperament. When alone she is restless, and always flits from place to place as if searching for some thing or some body.' Her sense of touch is developed to an unusual degree, and enables her to recognise her associates upon the slightest contact. Her sense of smell is very acute, enabling her to separate her own clothes from those of others; and her sense of taste is equally sound. In this respect she has an advantage over Laura Bridgman, in whom both these senses were reduced almost to extinction. She speedily learned to be neat and orderly about her person, and correct in her deportment. The first lesson is an interesting epoch. A doll had been sent Helen from Boston; and when she had made a satisfactory exploration of it, and was sitting quietly holding it, Miss Sullivan took Helen's hand and passed it over the doll; she then made the letters d-o-l-l in the finger-alphabet while Helen held her hand. 'I began to make the letters a second time. She immediately dropped the doll, and followed the motions of my fingers with one hand, while she repeated the letters with the other. She next tried to spell the word without assistance, though rather awkwardly. She did not give the double *l*, and so I spelled the word once more,laying stress on the repeated letter. She then spelled "doll" correctly. This process was repeated with other words, and Helen soon learned six words,—"doll," "hat," "mug," "pin," "cup," "ball". When given one of these objects, she would spell its name, but it was more than a week before she understood that all things were thus identified.' In a surprisingly short time Helen completely mastered the notion that objects had names, and that the finger-alphabet opened up to her a rich avenue of knowledge. Every thing had to be named, and she seemed to remember difficult combinations of letters, such as 'heliotrope' and 'chrysanthemum,' quite as readily and securely as shorter words. In less than two months she learned three hundred words, and in about four months she had acquired six hundred and twenty-five words—a truly remarkable achievement. She still used her gesture-signs; but, as her knowledge of words increased, the former fell into disuse. Next verbs were taught her, beginning with such as Helen herself could act, as 'sit,' 'stand,' 'shut,' 'open,' &c. Prepositions were similarly mastered. Helen was placed *in* the wardrobe, and the sentence spelled out to her. 'Box is *on* table,' 'Mildred is *in* crib,' are sentences which she constructed after little more than a month's instruction. Adjectives were skilfully introduced by an object-lesson upon a large, soft worsted ball and a bullet. Helen felt the difference in size at once. 'Taking the bullet, she made her habitual sign for "small"; that is, by pinching a little bit of the skin of one hand. Then she took the other ball, and made her sign for "large" by spreading both hands over it. I substituted the adjectives "large" and "small" for these signs. Then her attention was called to the hardness of the one ball, and the softness of the other; and so she learned "soft" and "hard". A few minutes afterwards she felt her little sister's head, and said to her mother, "Mildred's head is small and hard".' Even so arbitrary elements of language as the auxiliary 'will' and the conjunction 'and' were learned before two months of instruction had passed, and on May 1 she formed the sentence, 'Give Helen key, and Helen will open door'.

"From this the step to reading the raised type of the blind was an easy one. 'Incredible as it may seem, she learned all the letters, both capital and small, in one day. Next I turned to the first page of the "Primer," and made her touch the word "cat," spelling it on my fingers at the same time. Instantly she caught the idea, and asked me to find "dog," and many other words. Indeed, she was much displeased because

I could not find her name in the book.' She soon added writing to her accomplishments, and carefully formed the letters upon the grooved boards used by the blind. On the 12th of July she wrote her first letter, beginning thus: 'Helen will write mother letter papa did give helen medicine mildred will sit in swing mildred will kiss helen teacher did give helen peach,' &c. This well justifies the statement that she acquired more in four months than did Laura Bridgman in two years. Letter-writing is quite a passion with her, and, as she is also able to write by the Braille system, she has the pleasure of being able to read what she has written. Her progress in arithmetic is equally remarkable, going through such exercises as 'fifteen threes make forty-five,' &c. As examples of her powers of inference, the following will be of service: she asked her teacher, 'What is Helen made of?' and was answered, 'Flesh and blood and bone'. When asked what her dog was made of, she answered, after a moment's pause, 'Flesh and bone and blood'. When asked the same question about her doll, she was puzzled, but at last answered slowly, 'Straw'. That some of her inferences are not equally happy, the following illustrates: 'on being told that she was white, and that one of the servants was black, she concluded that all who occupied a similar menial position were of the same hue; and whenever I asked her the colour of a servant, she would say, "Black". When asked the colour of some one whose occupation she did not know, she seemed bewildered, and finally said, "Blue"'. Her memory is remarkably retentive, and her powers of imitation unusually developed. One of her favourite occupations is to dress herself up—a performance which she accomplishes not always with success according to our ideas. Her progress continues, and each letter is a marked improvement upon its predecessors. A letter to Mr. Anagnos contains the following sentences: 'My doll nancy is sleeping. She is sick. mildred is well. uncle frank has gone hunting deer. we will have venison when he comes home. I did ride in wheelbarrow and teacher did push it,' and so on."

A neatly printed third edition of Fechner's *Büchlein vom Leben nach dem Tode* (Hamburg u. Leipzig: L. Voss, 1887, pp. xi., 178) comes to hand just after the aged man has gone to discover what truth there was in his bright speculation of half a century ago. The *Booklet* was first issued in 1836 under that pseudonym of 'Dr. Mises' which the university-professor used to employ for his lighter writings; then, a little altered, with his own name in 1866. A new footnote has now been added, containing a reference to the elaborate memoir "Ueber die psychischen Massprincipien u. das Weber'sche Gesetz" which only last year (at the age of 86) he was still able to contribute to the *Philosophische Studien* (iv. 161-230). This memoir Prof. Wundt, in some striking words of farewell spoken at the grave (now printed in *Phil. Studien*, iv., Heft 4), pronounces to be "the clearest and most finished exposition of the problem that Fechner made in all the nearly forty years of his occupation with it". It should be added that, in the brief mention of his death in last MIND, his birthplace was wrongly given as "Moscow," instead of (Silesian) Muskau.

A prospectus has been issued of a new 'Library of Philosophy,' planned in view of the growing interest in Speculative Philosophy and the inadequate treatment its History has received from English writers. It will be arranged under three heads, comprising respectively works dealing with Schools of Philosophers, the History of Thought in Particular Departments, and the Subject Matter of Philosophy treated from an original point of view. The First Series will, it is hoped,

ultimately cover the entire History of Thought in the fields of Metaphysics and Ethics. At present it is proposed to deal more particularly with Modern Philosophy, and the following volumes have already been promised:—*Sensationalists: Locke to Mill*, by W. S. Hough; *Modern Realists: Leibniz to Lotze*, by Prof. A. Seth; *Early Idealists: Descartes to Leibniz*, by W. L. Courtney; *Later Idealists: Kant to Hegel*, by Prof. Wallace; *Scientific Evolutionists: Comte to Spencer*, by Prof. J. Watson; *Utilitarians: Bentham to Contemporary Writers*, by Prof. W. R. Sorley; *Moral Sense Writers: Shaftesbury to Martineau*, by Prof. Knight; *Idealistic Moralists: Kant to Green*, by Prof. H. Jones. The Second Series will include, among others:—*The History of Logic*, by Prof. G. S. Morris; *The History of Psychology*, by Prof. Adamson; *The History of Political Philosophy*: i. *Plato to Rousseau*, by D. G. Ritchie; ii. *Burke to the Present Day*, by J. H. Muirhead; *The History of Economics*, by J. Bonar; *The History of Aesthetics*, by B. Bosanquet; *The Evolution of Theology since Kant*, by Prof. O. Pfleiderer. The arrangements for the Third Series are not sufficiently advanced for announcement, but negotiations are in progress with some well-known writers. By way of introduction to the 'Library,' a translation of Erdmann's (smaller) *History of Philosophy*, in three volumes, by Dr. W. S. Hough, will be issued in October, 1888, and it is hoped that some of the other volumes of the 'Library' will follow in the spring of 1889. Mr. J. H. Muirhead has charge, as general editor, of the whole enterprise; Swan Sonnenschein & Co. will publish.

The Aristotelian Society for the Systematic Study of Philosophy (22 Albemarle Street, W.).—Since last record the meetings have been as follows:—Dec. 5, a 'Symposium' on the question "Is Mind synonymous with Consciousness?" the papers being contributed by the President, and Messrs. Alexander, Bosanquet, Ritchie and Stout; Dec. 19, a paper by Miss Plumptre on "Philosophy during the period of the Renaissance"; Jan. 2, a special meeting for discussing the President's Address, "The Unseen World"; Jan. 9, a paper by Mr. G. J. Romanes, F.R.S., on "Darwinism in relation to Design"; Jan. 23, a paper by Mr. Bernard Bosanquet on "The Philosophical Importance of a true Theory of Identity"; Feb. 6, a paper by Mr. J. S. Mann on "Wundt's Theory of Apperception"; Feb. 20, a paper by the Rev. E. P. Scrymgour on "The real essence of Religion". The reading of papers was in every instance followed by discussion.

Under Lord Gifford's bequest to the Scottish Universities (see Mind xii. 318), the following appointments to the Lectureships in Natural Theology have been made, for two years: Edinburgh, Dr. J. Hutchison Stirling; Glasgow, Prof. Max Müller; St. Andrews, Mr. Andrew Lang. There will evidently be no lack of variety in the treatment of the subject.

'The New Psychology' has just received in France a still more signal recognition than when M. Th. Ribot, editor of the *Revue Philosophique*, was two years ago appointed lecturer (not, as stated in Mind xi. 151, professor) at the Sorbonne. At the Collège de France, the chair of Law of Nature and of Nations was recently vacated by M. Franck. The famous College stands outside of the University of France, and in the judgment of its present Director, M. Renan, the time had come when a body, devoted wholly to the advancement of science and learning, should do something for a science that is certainly advancing. He proposed, therefore, that the vacant chair should be turned into one of Experimental and Comparative Psychology, and, the transformation being effected, M. Ribot was chosen for the post by the assembly of Professors. But the Academy of Moral and Political Sciences had to be consulted

in the matter, and it appears that this body, whose philosophical sympathies remain what they have been for two generations past, declared strongly against M. Ribot's appointment. It has finally been made by M. Liard, Director of Superior Instruction, with whom, in case of disagreement, it rested. Prof. Ribot is thus placed in the most effective position for continuing his psychological work. It is in view to found a laboratory in connexion with the chair, as soon as circumstances permit; but at present they are not favourable.

The centenary of Schopenhauer's birth (22nd February, 1788) has just been celebrated in Germany, where events of the kind are not forgotten. We are asked to mention that the subscription-list for the memorial of the philosopher to be erected in Frankfort is still open, at 'Deutsche Vereinsbank, 11 Junghofstrasse, Frankfurt a. M.'.

The Journal of Speculative Philosophy.—Vol. xxi., No. 1. K. Fischer—Criticism of Kant (tr.). Hegel—Philosophy of Religion (tr.). R. Munro—Lady Macbeth: a Psychological Sketch. H. C. Brockmeyer—Letters on Faust. S. C. Upton—L. Oliphant's *Sympneumata*. Notes.

The American Journal of Psychology.—Vol i., No. 2. H. H. Donaldson—On the relation of Neurology to Psychology. E. Cowles—Insistent and Fixed Ideas. J. Jastrow—A Critique of Psycho-physic Methods. Psychological Literature (Experimental; Histology of the Nervous System; Abnormal Psychology; Miscellaneous). Notes (Educational; Experimental; Abnormal).

Revue Philosophique.—An. xii., No. 1. A. Espinas—L'évolution mentale chez les animaux. F. Paulhan—L'associationnisme et la synthèse psychique. Adam—Pascal et Descartes (fin). Analyses, &c. (M. Müller, *The Science of Thought;* G. T. Ladd, *Elements of Physiological Psychology*, &c.). Rev. des Périodiques. No. 2. E. Beaussire—Questions de droit des gens. C. Dunan—L'espace visuel et l'espace tactile. Th. Ribot—Les états morbides de l'attention. Rev. Gén. (P. Tannery—Psychologie mathématique et psychophysique). Analyses, &c. (J. E. Maude, *The Foundations of Ethics;* J. M'Cosh, *The Motive Powers*, &c.). Notes, &c. (Ch. Richet et A. Binet—La vie psychique des microorganismes). No. 3. Ch. Richet—Les réflexes psychiques (i.). Pierre Janet—Les actes inconscients et la mémoire pendant le somnambulisme. B. Perez—L'art chez l'enfant: le dessin. Analyses, &c. Rev. des Period. Note (A. Binet—Sur les illusions de mouvement).

La Critique Philoophique (Nouv. Sér.).—An. iii., No. 12. A. Naville—De la classification des sciences (fin). C. Renouvier—De quelques systèmes contemporains de haute philosophie speculative: F. E. Abbot, Le pantheisme positiviste. E. Pécaut—La question de la vivisection. . . . An. iv., No. 1. . . . C. Renouvier—J. Royce, Le panthéisme idéaliste. L. Dauriac—De la réalité selon le sens commun. . . . No. 2. C. Renouvier—J. Royce, &c. F. Lequier—Dialogues sur le libre arbitre.

Rivista Italiana di Filosofia.—An. iii., No. 1. L. Pietrobono—La teoria dell' amore in Dante. R. Benzoni—Teorica del bello nelle ultime publicazioni d'estetica in Italia (ii.). A. Valdarnini—La scienza moderna e la filosofia teoretica. L. Ferri—Di una vecchia definizione del concetto. Bibliografia (G. C. Robertson, *Hobbes*, &c.).

Rivista di Filosofia Scientifica.—Vol. vi., No. 11. C. Lombroso—Le nuove conquiste della psichiatria. M. A. Vaccaro—Sulla vita degli animali in rapporto con la lotta di esistenza. F. Pietropaolo—L'universalità delle leggi della morale ed il concetto della libertà. Note Critiche, &c. (J. Moleschott—L'unità del sapere. A. Asturaro—La filosofia dell'

Hume ed il Kantismo secondo Tarantino). Riv. Anal. Riv. Bib. No. 12. G. Romiti—L'origine e la continuità della vita. A. Asturaro—Studi psico-biografici: G. Cardano e la psicologia patologica. Note Critiche (V. Julia—T. Maniani e i suoi *Dialoghi di Scienza prima*). Riv. Anal. (H. Spencer, *The Factors of Organic Evolution*, &c.). Riv. Bib.

Zeitschrift für Philosophie, &c.—Bd. xci., Heft 2. H. Göring—Sophie Germain, die Vorläuferin Comte's (Schluss). Th. Achelis—Wundt's Philosophie. L. Busse—Beiträge zur Entwicklungsgeschichte Spinoza's (ii., iii.). G. Cantor—Mitteilungen zur Lehre vom Transfiniten (ii.). A. Steudel—Ueber den dermaligen Stand der Philosophie. Entgegnungen (Mann v. Planck; Mainzer v. Knauer). Recensionen, &c. Bd. xcii., Heft 1. R. Wahle—Eine Verteidigung der Willensfreiheit. J. Volkelt—Psychologische Streitfragen (ii.). G. Simmel—Einige Bemerkungen über Goethe's Verhältnis zur Ethik. B. Münz—Protagoras u. kein Ende. Recensionen. Heft 2. G. Glogau—Proben aus dem zweiten Bande vom *Abriss der philosophischen Grundwissenschaften*. O. Plumacher—Meister Eckhart. L. Busse—Beiträge, &c. (iv.). G. Cantor—Mitteilungen, &c. (Schluss). Erwiderung (Keibel v. Thiele; Romundt v. Koppelmann). Recensionen, &c.

Philosophische Monatshefte.—Bd. xxiv., Heft 3, 4. A. Elsas—Die Deutung der psychophysischen Gesetze. M. J. Monrad—Ueber den sachlichen Zusammenhang der neuplatonischen Philosophie mit vorhergehenden Denkrichtungen, besonders mit dem Skepticismus. Recensionen, &c. Litteraturbericht, &c. Heft 5, 6. H. Cohen—Jubiläums-Betrachtungen. F. Lukas—Der grosse Mythos in Platon's *Phaidros*, &c. E. v. Hartmann—Mein Verhältniss zu Hegel. Recensionen, &c.

Zeitschrift für Völkerpsychologie u. Sprachwissenschaft.—Bd. xviii., Heft 1. C. Haberland—Ueber Gebräuche u. Aberglauben beim Essen. J. Krohn—Die Entstehung der einheitlichen Epen im allgemeinen. J. Goldziher—Arabische Beiträge zur Volksetymologie. R. v. Sowa—Die Mundart der ostpreussischen Zigeuner. Beurteilungen.

Vierteljahrsschrift für wissenschaftliche Philosophie.—Bd. xii., Heft 1. A. Meinong—Ueber Sinnesermüdung im Bereiche des Weber'schen Gesetzes. G. Simmel—Bemerkungen zu socialethischen Problemen. O. Külpe—Zur Theorie der sinnlichen Gefühle (Schluss). A. Wernicke—Die asymptotische Function des Bewusstseins. Anzeigen, &c.

Philosophische Studien.—Bd. iv., Heft 4. W. Wundt—Zur Erinnerung an G. T. Fechner. L. Lange—Neue Experimente über den Vorgang der einfachen Reaction auf Sinneseindrücke. E. Luft—Ueber die Unterschiedsempfindlichkeit für Tonhöhen, J. Merkel—Die Abhängigkeit zwischen Reiz u. Empfindung. W. Reichardt—Kant's Lehre von den synthetischen Urtheilen a priori in ihrer Bedeutung für die Mathematik. W. Wundt—Berichtigung.

Archiv für Geschichte der Philosophie.—Bd. i., Heft 2. Weygoldt—Zu Diogenes von Apollonia. E. Zeller—Zu Aristippus. P. Natorp—Ueber Aristoteles' *Metaphysik*, K 1-8, 1065 a 26. G. Heylbut—Zur Ethik des Theophrast von Eresos. P. Wendland—Posidonius' Werk περὶ θεῶν. C. J. Gerhardt—Leibniz über den Begriff der Bewegung. B. Erdmann—Kant u. Hume um 1762 (ii.). L. Stein—Die im Halle aufgefundenen Leibniz-Briefe (ii.). Jahresbericht (H. Diels—Vorsokratiker (ii.). E. Zeller—Sokrates u. die kleineren sokratischen Schulen. B. Erdmann—Neuere Philosophie bis auf Kant. W. Dilthey—*Briefe von u. an Hegel*. P. Tannery—L'histoire de la philosophie en France, 1886.

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MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

I.—THE HERBARTIAN PSYCHOLOGY. (I.)

By G. F. Stout.

The present is the first of a series of articles intended to draw attention to that movement in the history of Psychology in Germany which originated with Herbart and Beneke, and to compare it critically with the work of the Associationist school in England. I shall begin by stating, with the least possible comment, the views of Herbart, as they are expounded in his two most important psychological works, the *Lehrbuch zur Psychologie*, and the *Psychologie neu gegründet auf Erfahrung, Metaphysik und Mathematik*. I shall always refer to the former as the *Lehrbuch* and to the latter as the *Psychologie*. The *Lehrbuch* was the first work in which Herbart gave a systematic account of his psychological doctrines. It is brief and easy to read. The first edition appeared in 1813; a new one, revised and enlarged by the author, was published in 1834. The *Psychologie* (from the years 1824-25) is Herbart's capital achievement. It is divided into two parts, of which the first is synthetic and the second analytic. In the synthetic part, Herbart endeavours to construct a psychological theory on the basis of certain abstract principles. In the analytic part, he describes and analyses the concrete phenomena of mind,

and applies to their explanation the results of the first part. The synthetic portion of Herbart's work will engage our attention in the present article. It is much less interesting and important than the analytic, yet it must not be neglected; for, apart from it, Herbart's psychological doctrines cannot be understood in their systematic completeness.

§ 1. *Faculty-Psychology due to Involuntary Abstraction.* The most striking negative feature of the Herbartian Psychology is its uncompromising polemic against innate faculties, activities and predispositions. In this respect Herbart is to a great extent in agreement with the English Associationists. He saw, however, more distinctly than they did, the exact nature and origin of the older methods, which he so resolutely discarded. He attempts to show, at the outset, that the faculty-psychology had its root in the very nature of the introspective process, and that it was therefore unavoidable so long as inner perception was regarded as the sole and sufficient basis of mental science. In physical science generalisation is voluntary; the individual phenomena wait to be examined and compared in detail, so that in forming a classification those resemblances and differences may be emphasised which best conduce to scientific purposes; in purely introspective psychology the case is otherwise. The individual phenomena do not wait for deliberate examination and detailed comparison (*Lehrb.*, § 3). "Self-observation mutilates the facts of consciousness in the very act of apprehending them, tears them from their necessary context, and hands them over to a disorderly abstraction, which finds no resting-place till it has arrived at the highest genera." It is impossible for introspection to catch anything beyond transient glimpses of mental phenomena in their broad outlines. The very endeavour to be exact occasions inexactness; for it leads to disregard of what is obscure, and it is precisely the specialising details of the particular case which are obscurest. The result is that in the older psychology we are everywhere confronted with vague generalities, which contribute nothing to scientific explanation, because they are incapable of being definitely applied to specific instances.

Nor does the evil end here. The human mind has always been prone to mistake abstractions for realities, even when the corresponding concretes stand out in clear and definite detail. This propensity becomes almost irresistible in a case in which concrete details are shadowy and evasive. Hence we find that the faculty-psychologists, unable to

make legitimate use of their generalisations in the explanation of particular phenomena, treated them as if they were real forces producing these phenomena. Thus in their hands Psychology became transformed into a kind of mythology, which was none the less mischievous because scarcely anyone overtly and explicitly professed to believe in it.

§ 2. *Proposed Substitute for purely Introspective Method.* Are we then to conclude that the results of introspection are useless? If this is so, need we on that account despair of Psychology, or shall we be able to discover some more secure foundation on which to build it? Herbart maintains that, in spite of past failure, it is yet possible to construct a mental science worthy of the name. Introspection, properly used, yields a valuable and even indispensable point of departure (*Psych.*, §§ 11, 13). Certain facts most clearly revealed to inner observation display, when they are logically analysed, a problematic and, in some cases, a self-contradictory character, due to their detachment from the connexions which alone make them intelligible. Now if, without doing violence to the clear evidence of introspection, we can so supplement and modify these problematic facts by means of hypotheses that the implied contradictions and incoherencies disappear, then the explanatory force of our assumptions will be some guarantee of their correctness. If, moreover, these hypotheses can be successfully applied to the explanation of particular phenomena, the evidence in their favour will be greatly strengthened. Finally, if the lines on which they are framed can be determined with certainty and precision on grounds independent of Psychology, the proposed method will be justified at every point. All these conditions Herbart attempts to satisfy.

§ 3. *Problems contained in the Results of Introspection.* The whole scope and aim of Psychology is to show how given facts, otherwise unintelligible, may be understood by assumption of hidden facts with which they are connected according to definite laws. In this way we are bound, for psychological purposes, to transcend experience in order to explain experience. Wherever inner observation encounters phenomena which need to be hypothetically supplemented before they can be understood, we have a starting-point for psychological investigation. Among the problems furnished by introspection, some excite inquiry merely because of the indeterminateness of the relations involved, others appear to

imply inner contradictions. As an example of the former class we may take Desire. Desire implies always some presented content of consciousness which is desired. Now, so soon as we begin to examine this relation closely, it gives rise to a series of questions. Under what conditions does the presented content become an object of desire? What must be the nature of the presentation involved, and of the presentative activity, in order that such a phenomenon as conation may arise in consciousness? If we can find an adequate answer, by going back from desire as a given conditionate to hitherto unknown conditions adequate to account for it, then in the fact that we feel desire we have a point of departure for psychological inquiry.

The chief instance of a datum of introspection involving an inner contradiction is found in the fact of Self-consciousness, as implying identity of subject and object. It seems to lie in the very nature of the Ego that it should be at the same time and in the same sense one and dual:—one, because the Self which knows is identified with the Self which is known; dual, because they are separated by this very antithesis of knower and known. Nor is this the only difficulty; if we inquire what it is that the Ego is aware of when it is aware of itself, we find ourselves confronted by another puzzle. The Self is not to be identified with any particular act of thinking, feeling, willing, &c., seeing that it is contra-distinguished from each and all of these as the common centre to which they are referred. And yet apart from these states the Ego is nothing; it possesses no mark by which it can be distinguished except its own Self-awareness, which involves an inner contradiction.

According to Herbart's own statement, the chief starting-point of his psychology lay in the clear formulation of these puzzling deliverances of introspection concerning the nature of the Ego, and its goal was found in their solution. I shall try to explain the way in which he performed this task, keeping other topics in relative subordination.

§ 4. *Metaphysical Basis of Ultimate Psychological Assumptions.* The lines on which he proceeded he found prescribed for him by his general metaphysical doctrine, according to which the soul is intrinsically a simple, unchanging being, originally without any plurality of states, activities or powers. The variety of mental phenomena, as they actually exist, is ultimately referred by him to the reactions of the soul, whereby it resists a diversity of disturbances *ab extra* due to its relations with other simple beings. As a metaphysical

speculation, this doctrine in no way concerns us. But its psychological import is of the greatest consequence.

In the first place, it implies that psychological phenomena are to be explained as due to the combination and interaction of certain ultimate mental states initiated *ab extra*, to the exclusion of everything of the nature of innate ideas, faculties or activities. These ultimate states are called by him presentations (*Vorstellungen*). So far Herbart takes up a position similar to that of the English Associationists. Like them he bases his explanations on the doctrine of a psychological mechanism. He differed from them partly in the mode in which he conceived and formulated his ultimate laws of combination and interaction, partly in the more thorough-going and systematic nature of his mechanical explanations. The latter point is most strikingly illustrated by his attempt to obtain quantitative exactness in his results through the application of mathematics to psychology. The doctrine of the simplicity of the soul had a marked effect on his psychological views: it saved him from the atomistic standpoint, on account of which the English Associationists have been so severely criticised. Since the soul is one and simple, its resistance to outward disturbance must be one simple act, which can be considered as multiple only in so far as due to a multiplicity of disturbing conditions. Hence the presentation of plurality and distinction within the content of consciousness is something which requires explanation instead of being regarded as ultimate. Thus the form which the problem of mental development assumed for Herbart was not—How do isolated sensation-atoms combine to form a mind? but rather—How does demarcation and partition grow up within an original distinctionless unity? The soul is not only simple, but unchanging; it possesses no inner tendency to pass from one condition into another; hence, when it is once in a given state there seems no reason why, apart from interference *ab extra*, this state should cease or change. In view of this doctrine, the lapse of a presentation into unconsciousness, after it has once been presented in consciousness, constitutes a problem. For Herbart the primary question is not—How do presentations come to be reinstated in consciousness after disappearance? but rather—How is it possible for them to disappear? The key both to this problem and to that of the origin of plurality within the content of consciousness is found by Herbart in the mutual conflict of presentations which are opposed in quality. Presentations may be entirely alike—as, for instance, my sensation of green yesterday and my

sensation of green to-day; or they may be entirely disparate —*e.g.*, the presentation of sweetness and that of redness: in both these cases they, *ceteris paribus*, merge indistinguishably in one total presentation when they are co-presented in consciousness. If, on the other hand, they are not disparate, but contrary, as are, for example, the presentations of red and of green, they resist co-presentation; in other words, they tend to exclude each other from consciousness. In virtue of this mutual interference presentations become transformed into forces, which oppose or support each other. From this point of view the original unity of co-presented and compatible contents of consciousness acquires a new significance. It becomes a mechanical union of presentations constituting a total force, which resists the arrest of any one of its components. In order, however, to bring out the full meaning of this mechanical interaction of presentations, we must explain the distinction between presentation, presentative activity and presented content.

§ 5. *Presentation, Presentative Activity and Presented Content.* Presentations of contrary quality exclude each other from consciousness. So far as this exclusion takes place, an act of the soul which was originally conscious ceases to be so: it is not, however, annihilated; on the contrary, in ceasing to be an actual presentation it *ipso facto* becomes transformed into a latent tendency to be presented, it remains as a state of the soul, but it is no longer a conscious state. When and so far as a presentation is in consciousness it is said to be an actual presentative activity; when and so far as it is excluded from consciousness—*i.e.*, ceases to be a presentation at all—it is said to be a presentative activity under arrest. In other words, it is an activity which tends to become a presentation, but is hindered from doing so by obstacles. Even when the presentative activity is actual, we must still distinguish between it and the presented content. The presentative activity is an intensive quantity which may be partly arrested and partly unarrested. The term "presented content," on the other hand, is used in reference to the quality, and to the quality alone, of a presentation, in contradistinction from its intensity. When a presentative activity is partly arrested and partly unarrested, the quantum left unarrested constitutes the degree of distinctness of the presented content. The greater the quantum arrested, the more obscure the presented content becomes. Thus one and the same content may be presented in various grades of distinctness or obscurity.

The main point to be borne in mind for practical purposes is that presentations may be regarded (1) as having mechanical relations with each other, and (2) in abstraction from such relations. The phrase "presentative activity" has reference to the former point of view, and it is used only when presentations are considered as forces interacting with each other. The phrase "presented content" has reference to the latter point of view, and it is used only when the mechanical interaction of presentations is disregarded, and their internal quality alone considered. Thus presented contents may be *contrary*, but it is the actual presentative activities which *conflict*.

§ 6. *Significance of Herbart's Metaphysics for his Psychology.* At this point we may finally dismiss from consideration the Herbartian metaphysics. It was necessary to refer to it in order to show the point of view from which Herbart approached psychology. For us the interest of his psychological theories is entirely independent of his metaphysical speculations. He himself is compelled in the sequel to found far more on experience and far less on speculation than accords with his original plan. He finds it impossible to deal with the complexity of concrete phenomena by any process of synthetic deduction from general principles. By help of mathematical calculation he carries such synthetic deduction up to a certain point in the first part of his *Psychologie*. But in the second, and greatly more valuable part, he abandons this method, and undertakes an analysis of mental phenomena based on experience, using his previous results only as a guiding clue to the explanation of the concrete facts of mind. It is this application of his fundamental principles which invests them with interest and value for us. It is only as a preliminary to the analytic part of Herbart's work, that it is worth while to discuss his abstract doctrines concerning the combination and interaction of presentations. It is only for the purpose of throwing light upon these abstract doctrines that it is worth while to notice the metaphysical speculations with which, in Herbart's view, they were connected.

§ 7. *Relations between Presented Contents.* Before approaching our main task it is necessary to discuss at some length the fundamental laws of the interaction of presentations, dismissing finally all reference to metaphysical considerations. We must, to begin with, carefully distinguish the three cases already referred to, (*a*) that in which presented contents are

exactly similar, (*b*) that in which they are contrary, and (*c*) that in which they are entirely disparate.

Contrary presentations are those which have affinity with each other, without being exactly alike. Thus, different presentations belonging to the same sense or to the same group of movements are contrary. Contrariety admits of degrees. Its lowest grade is scarcely distinguishable from perfect likeness; its highest grade involves complete opposition. Thus, white and black are completely contrary: the intermediate shades of grey are only partly contrary to pure white and to pure black and to each other. A series of this kind is called by Herbart a qualitative continuum, and he holds that all contrary presentations can be arranged in such continua. Mr. Ward also uses the expression qualitative continuum exactly in the Herbartian sense, as denoting a "series of presentations changing gradually in quality, so that any two differ less the more they approximate in the series". Presentations are disparate when they are neither contrary nor exactly alike: this is the case only when they belong to entirely disconnected continua. Thus, a visual sensation and a tactile are disparate; because they admit of no qualitative gradations between them.

Each of these modes of relation between presented contents is connected with a corresponding relation between presentative activities. Contrary presentations arrest each other; if the arrest is only partial, the unarrested remainders fuse with each other. Exactly similar presentations fuse without arrest. Disparate presentations are not said to fuse, but to become complicated with each other. Thus, the terms *arrest*, *complication* and *fusion* have, in the Herbartian system, definite and distinct applications. I shall now discuss each of these processes in turn, beginning with arrest.

§ 8. *Mutual Arrest of Contrary Presentations.* The first point to be noted under this head is that arrest in no case involves annihilation. When one presentation is extruded from consciousness by another, it does not on that account cease to exist. It only ceases to exist as an actual presentation, being transformed into a mere tendency to be presented, so that, on removal of obstacles, it *ipso facto* emerges again into consciousness. The second noteworthy point is that arrest is a gradual process, in which the arrested presentation passes continuously through intermediate stages of obscuration before it finally vanishes. This gradual obscuration is called sinking. When, on the other hand, a presentation increases in distinctness, it is said to be rising.

The two processes of sinking and rising constitute what Herbart calls the "movement of presentations". In the next place it must be clearly understood that arrest need not proceed so far as to involve total repression of presentative activity. Coexistence in consciousness becomes possible without further conflict, when each of the antagonistic presentations has reached a certain stage of obscuration, which is called its statical point. But a presentation may sink to this grade of obscuration without entirely disappearing. When arrest has proceeded so far that all the conflicting presentations have attained their statical points, they are said to be in equilibrium. The total diminution in actual presentative activity which is required to produce a state of equilibrium is called the sum of arrest. The distribution of this sum among the presentations involved is determined by their contrariety and their conscious intensity. The more intense offer a stronger resistance to arrest than the less intense. The latter are therefore proportionately more obscured; and since, *ex hypothesi*, they possess initially a less degree of distinctness, a great many of them may be completely suppressed by a comparatively few which possess at the outset a greater amount of conscious intensity. Hence arises what is called the narrowness of consciousness. Of the innumerable presentations which come into being in the course of a varied experience, only a small proportion can be in consciousness at any moment. The rest are totally obscured.

§ 9. *Statical and Dynamical Thresholds.* When arresting forces are adequate, and no more than adequate, to entirely obscure a presentation at a given moment, it is said to be on the threshold of consciousness at that moment. When the arresting forces are more than adequate to produce total obscuration, it is said to be below the threshold. If it is in consciousness at all, it is above the threshold. If it is above, on or below the threshold, when the conditions of equilibrium require that it should be so, then it is said to be above, on or below the statical threshold. If it is above, on or below the threshold, when the conditions of equilibrium require that it should not be so, it is said to be above, on or below the dynamical threshold. Presentations below the statical threshold are totally without influence on conscious processes, so that in this respect they might as well be nonexistent. Presentations below the dynamical threshold, on the contrary, operate as very important factors in determining the course of events within consciousness.

The possibility of a presentation sinking beneath the dynamical threshold, or indeed of its sinking beneath its statical point at all, perhaps requires some explanation. The essential condition is, that a number of presentations must already be approaching equilibrium when a fresh one appears in consciousness. The new-comer is, at the outset, far more removed from its statical point than are the pre-existing presentations. It possesses a proportionately greater quantum of actual presentative activity, and it will therefore, to commence with, have a great advantage in its conflict with those which have already passed through a process of gradual obscuration. Thus it may suppress some of these far beneath their statical points, and it may even, for a time, extrude from consciousness presentations which, in a state of equilibrium, would surpass it in distinctness.

§ 10. *Mechanical Union of Presentations.* Presentations are in mechanical union when they form a total force which resists with its whole strength the arrest of any of its components. The result is, with some limitations, the same as if the presentation threatened with arrest received an addition to its own intensity. To understand the importance of this, we must bear in mind that a presentation suffers less in conflict with others in proportion as its relative intensity is greater. Thus, x in conflict with y and z united will be more obscured than it would be in conflict with the same y and z if they acted separately.

The fundamental condition of union is co-presentation. In so far as a presentative activity ceases to be actual and becomes a latent tendency, it cannot enter into any kind of combination. The remnant of it which is still left above the threshold may do so, but not the portion which is suppressed. Thus, a totally obscured presentation cannot unite with others at all; a partially obscured presentation can only do so with the part which remains unobscured. There follows from this a marked distinction between the union of presentations which belong to the same qualitative continuum, and that of presentations which belong to separate continua. In the first case, they will conflict in so far as they are diverse, and they will only combine in so far as their mutual antagonism does not preclude their combination. Such union of contrary presentations Herbart calls fusion with arrest. In the second case, there is no antagonism of the presentations *inter se*, and they will therefore, *ceteris paribus*, unite completely. This union of diverse presentations without mutual arrest is called complication,

and the resulting total force is called a complex. For instance, the visible appearance, the smell, the feel and the taste of an orange, are complicated with each other and form a single complex.

Presentations which belong to the same qualitative continuum must conflict if they are not identical in content, and they will only combine in so far as their mutual antagonism allows. Such combination is called fusion. It is, however, necessary to distinguish between fusion before and fusion after arrest. Since all co-presentation, in so far as it does not give rise to conflict, causes union, it follows that union must take place wherever mutual arrest has reached a point at which conflict ceases. This is called fusion after arrest, and it takes place even in the case of complete contrast. But where the contrast is only partial, there is a tendency to fusion before as well as after arrest; for partial conflict involves partial likeness, and likeness *quâ* likeness is a reason for fusion. Absolutely similar presentations, when they are co-presented, do not merely unite to form a collective force, acting, under certain limitations, as if it were a single presentation. Apart from interfering conditions they do actually coincide, so as to form one and the same presentation. Now, when the likeness is only partial, the correlative contrariety precludes this absolute coalescence. Nevertheless the tendency to coalesce exists, and forms a special cause of mechanical union. In the case of presentations which have an appreciable degree of contrariety, fusion before arrest can only take place gradually, because the contrast occasions a resistance to union, which it takes time to overcome. If the amount of contrariety reaches a certain point, the partial likeness fails to produce any actual fusion. Even then, however, there is still a tendency to fuse, which is of importance for the explanation of æsthetic feeling. Where the degree of contrariety is very small, fusion before and fusion after arrest nearly coincide, since there is no appreciable conflict. After this brief account of the elementary processes of arrest, complication, fusion before arrest and fusion after arrest, we must now consider some of their most general applications. We have to discuss—(1) Sensation as conditioned by the law of diminishing susceptibility; (2) the general laws of Reproduction, mediate and immediate; (3) the formation of certain kinds of Series.

§ 11. *Sensations as conditioned by the Law of Diminishing Susceptibility.* According to Herbart, every sensation, how-

ever simple it may appear, is due to the fusion of innumerable homogeneous components, which are given successively in the minute divisions of time during which the external stimulus operates (*Psych.*, § 94). Thus the genesis of a sensation depends (1) on the persistence of mental states, after they have once come into being, and (2) on the fusion of similars. Now if, so long as the external excitation continued, the rate of increase in the quantum of sensation per unit of time remained constant, there would be no limit to the consequent accumulation of intensity. But this is not so. There is a maximum which the sensation never attains, however persistently the external stimulus is applied. Herbart accordingly assumes that the rate of increase in sensation at any moment is proportional to the amount by which the quantum already produced and still persistent in consciousness falls short of the maximum. He regards the rate of increase as due to the susceptibility of the subject to the special kind of stimulus by which it is affected. The principle, according to which the rate of increase is smaller in proportion as the pre-existing quantum of sensation is greater, is named by him the law of diminishing susceptibility. He extends its application so as to include partially dissimilar as well as completely similar presentations. In this generalised form it may be stated as follows :—In proportion as one presentation resembles another, the pre-existence of either of them in consciousness diminishes susceptibility to the other.

It must be carefully noted that presentations beneath the statical threshold can have no power to diminish susceptibility to others which resemble them. So far as a presentation has become a mere latent tendency, it is *ipso facto* isolated. The course of events within consciousness proceeds as if it had no existence. Hence, a renewal of susceptibility to a special kind of sense-affection takes place in so far as pre-existing homogeneous presentations sink beneath the statical threshold.

§ 12. *Immediate Reproduction.* By the same principle the re-emergence of a presentation in consciousness must involve diminution of susceptibility to the corresponding sensation. Now the mere removal of the conditions producing arrest is sufficient to cause re-emergence. The presentative activity must of necessity become an actual presentation when there is nothing to hinder it. When a presentation rises, in this manner, spontaneously into consciousness, on the mere removal of obstacles, and apart from any help due to compli-

cation or fusion, it is said to be immediately reproduced. The most familiar case is that of a new sensation reproducing pre-formed presentations of like content. It does this by arresting presentations which, being opposed to itself, are therefore opposed to whatever it resembles. If this immediate revival took place completely in an inappreciable time, the conditions of renewed susceptibility would cease to operate. But reproduction can no more take place suddenly than arrest can do so. Hence the re-emergence of previous similar presentations does not annihilate susceptibility to new sensation. It only diminishes this susceptibility gradually, and in a degree proportional to the rapidity with which the immediate reproduction takes place.

Further, the reproduced presentations of necessity fuse with that which reproduces them, because they are partly or wholly similar to it, and are co-presented with it. In this way there is generated by repetition of like impressions a total force possessing a mechanical efficacy far exceeding what the law of diminishing susceptibility would allow any isolated sensation to attain. This result will prove to be of the greatest importance when we come to consider the origin of general concepts.

Familiar objects cease to attract attention because in their case diminution of susceptibility takes place very rapidly. Through frequent reiteration of similar experience a fused total is formed, which is very readily reproduced owing to its great strength, and which therefore rapidly decreases sensibility to the outward stimulus.

§ 13. *Mediate Reproduction.* Mediate reproduction is due to complication and fusion. When a presentation enters consciousness it tends to reinstate other presentations which have combined with it on previous occasions. The main principles which regulate this process are the following :—

(1) No presentation can reproduce or help to reproduce another if and so far as it is itself beneath the statical threshold.

(2) The reproducing presentation tends to raise the reproduced to the degree of distinctness which the latter possessed at the time when the combination between them took place.

(3) When this degree of distinctness is attained, the reproducing presentation ceases to yield any further help.

(4) The deeper the reproduced presentation is sunk beneath that degree of distinctness which it possessed at the time when combination took place, the greater is the

reproductive energy, and the more rapidly, therefore, will the reproduction take place.

(5) The more intense the reproducing presentation was at the time of combination, the greater is its reproductive energy, and the more rapidly, therefore, will the reproduction take place. (This statement is limited by (1).)

The degree of distinctness possessed by a partially arrested presentation is called its residuum, being the amount of presentative activity which still remains above the threshold.

§ 14. *Evolution and Involution of Series.* The above rules of reproduction have a most important application to cases in which unequal remnants, r, r', r'', &c., of the same presentation P have fused with a number of different presentations Π, Π', Π'', &c. The time-order in which P reinstates Π, Π', Π'' in consciousness in their original combining distinctness, or as nearly so as the conditions admit, corresponds to the descending order of magnitude of the residua through which it is connected with them. From this it follows that, *ceteris paribus*, presentations are reproduced in the same order in which they are given in sense-perception.

Suppose a series of successive sensations α, β, γ, δ, &c., α will, from the outset, suffer gradual arrest from pre-existing presentations. When α is already partially obscured, β rises into relatively distinct consciousness and fuses with the sinking α. Then comes γ, which fuses with the partially obscured β and with the still more obscured α. Similarly δ, when it is presented with full distinctness, fuses with the preceding α, β, γ, in their graduated phases of obscuration. In like manner, every succeeding member of the series fuses with all of the preceding which remain in any degree above the threshold, and it unites with a smaller or greater remnant of each according as they are respectively nearer to or further from the commencement of the series. The converse relation holds between presentations which precede and those which follow: α is more distinct when it fuses with β than when it fuses with γ; it is more distinct when it fuses with γ than when it fuses with δ, and so on till it sinks beneath the threshold.

Assume now that the whole series has for a time disappeared from consciousness, and that the initial member α is recalled by immediate reproduction or otherwise; α operates to recall β with an energy proportioned to its own actual presentative activity at the time when it fused with β. Similarly the energy with which it recalls γ is proportioned

to its own distinctness when it entered into union with γ. The same holds good for all other members of series which were presented before α disappeared from consciousness. Now α was most distinct when it fused with β, less so when it fused with γ, and it became continually more obscured as it combined with one after another of the remaining members of the series. Hence it recalls β more rapidly than γ, and so on. The reproductive action of β, γ, δ, &c., is similar with respect to the parts of the series posterior to them. The result is that the whole train of presentations is successively revived in the same time-order in which it was originally given in sense-perception. This successive reproduction is called evolution of series.

If, instead of α, some posterior member of the original sense-series be immediately reproduced, it will recall not only the following, but also the anterior members. Thus, γ will reproduce α, β, as well as δ, ϵ, ζ. But there will be a fundamental difference in the way in which this takes place. γ recalls δ, ϵ, ζ, successively, because it was itself in varying phases of intensity when it was co-presented with them, and it tends to raise them to full sensuous distinctness, because all possessed such distinctness when they were co-presented with it. On the other hand, it recalls α, β not successively but simultaneously, because it entered simultaneously into combination with them, and it tends to raise them not to full sensuous distinctness, but only to that measure of distinctness which they possessed at the time when their union with it took place. Hence there is no evolution of series backwards, but only a simultaneous revival of anterior members in graduated phases of obscurity. This form of reproduction is called involution of series.

To complete the above statement it is necessary to note that in the evolution of a series the emergence of each successive member of it is accompanied by the subsidence of those which precede, just as in the original sense-given sequence. This is due partly to arrest from extraneous presentations and partly to the nature of the series itself. γ, in reproducing δ, ϵ, ζ, occasions conflicts between δ, ϵ, ζ, and α, β. Moreover, the arrest of α and β must extend also to γ, because it involves diminution of the residua of α and β beneath the measure of distinctness possessed by them, when they combined with γ. Of course its reproductive energy will not be diminished by this increasing obscuration, except in so far as it sinks beneath the residual intensities which it possessed at the time of its fusion with other parts of the series.

Series similar to the above may be formed under other conditions. The presentations α, β, γ, need not be originally given in a definite time-sequence in order that they may be reproduced in such a sequence. The same result may be due to their forming parts of a qualitative continuum, so that they can be arranged in an order of graduated contrast. If γ be more contrary to α than it is to β, and if δ be more contrary to α than to β, and more contrary to β than to γ, then, since intimacy of fusion is, *ceteris paribus*, inversely proportional to degree of contrariety, there will come into being, under favourable conditions, a series which evolves itself in an order corresponding to the qualitative affinity of its components. Series of this kind are of the greatest importance in the processes of classification and definite comparison.

§ 15. *Correspondence of Mechanical Relations with Presented Relations.* I have spoken hitherto only of the order in which presentations reinstate one another in consciousness; but the real import of the foregoing results, and, indeed, of the whole doctrine of psychological mechanism, can only be understood when regard is had to the way in which relations of the presentative activity are connected with relations constitutive of the presented content. The most important principle of correspondence may be stated thus:—In presented series *quâ* presented, the comparative nearness or remoteness of any two terms to a third depends, *ceteris paribus*, on the comparative intimacy their mechanical union has with it. For instance, if P is connected by a remnant r with Π, and by a smaller remnant r' with Π', then, *ceteris paribus*, the presented contents of Π and Π' will appear in consciousness as parts of a series in which Π' is more remote from P than Π is, and in which, therefore, Π is intermediate between P and Π'.

The parallelism of mechanical interaction and presented connexion could not have been treated with advantage before discussing the elementary modes of reproduction. It is necessary to draw attention to it here, both as a supplement to the preceding exposition and as a prelude to what follows. Up to this point I have spoken only of the way in which presentations become connected so as to form simple series. In order to complete the present instalment of my undertaking, and to lead up to the analytic portion of Herbart's work, I must say something about the way in which series, such as those above described, are connected with each other. This topic may conveniently be divided under three heads—

(1) The mutual arrest and support of different series so far as this depends purely on the form of serial reproduction;
(2) The mutual curtailment of series;
(3) The manifold interweaving of series.

§ 16. *Mutual Arrest and Support due to Serial Form.* Series may arrest or support each other because of their contrariety or likeness, *quâ* series, as distinguished from the likeness or contrariety of the presentations composing them. If, for instance, a sense-perception tends to reproduce simultaneously two pre-formed series in which the same presentations are differently arranged, the two orders of reproduction will be in conflict and will arrest each other. On the other hand, series which are similar in form support one another, and even revive each other by immediate reproduction. We are thus enabled to recognise a letter of the alphabet whether it be written in red ink or in black ink or in golden letters. The comparative ease with which we apprehend symmetrical figures is also to be referred to this head.[1]

§ 17. *Mutual Curtailment of Series.* Series shorten each other when they have the same beginnings and contrary continuations. Every presentation owing to the conditions of its genesis has a place in more than one series. When it first arises in sense-perception, it combines partly with other sense-given elements, partly with presentations which already pre-exist in consciousness, and partly with others which it reproduces immediately or causes to be reproduced immediately. Now, if we suppose one kind of presentation to be often repeated in sense-experience, it will have entered into a multitude of combinations. Hence, whenever it is reinstated in consciousness, it will tend to cause the evolution of a plurality of series discrepant partly in form and partly in the quality of their components. These series will conflict and mutually hinder each other from evolving, and, the longer the reproductive tendencies work, the greater will the conflict and reciprocal obscuration become. If we add to this that the obscuration of anterior members of an evolving series, when it goes beyond a certain point, impairs their efficiency in reproducing posterior members, it becomes obvious that curtailment of the antagonistic trains of ideas is bound to ensue. The central presentation in which they have their origin must, to a large extent, share the arrest of the series

[1] *Psych.*, §§ 100, 114. Herbart's statements on this subject are somewhat meagre and vague.

connected with it. But, if it has been sufficiently often repeated in sense-perception after renewal of susceptibility, it will be strong enough to maintain a comparatively high degree of conscious intensity. At the same time, the content of the central presentation will be in a manner isolated, because there will be no appreciable evolution of the diverging trains of presentations which meet in it as in a point of intersection. It can, therefore, to a certain extent, be considered apart from the special contexts in which it was presented to sense-perception at particular times and places. In this kind of mental formation lies the germ of the general concept.

§ 18. *Interweaving of Series.* Interweaving means that from each term of a given series trains of reproduction start, which are in their turn at once separated and interconnected by cross-series. On the side of the presented content regular mechanical interweaving is correlated with the consciousness of a spatial order, or of some order more or less analogous to the spatial; for example, the colour-triangle.

Besides this regular interweaving by which a perfect network is formed, there arise in the course of a varied experience all kinds and degrees of ramifying and re-entrant interconnexion. Where the components of a large group of presentations are connected in a more manifold and intimate manner with each other than they are with other parts of the total mental system, they form a relatively independent and separate mass. Varying environments and occupations give rise to the formation of many such masses in the developed human mind. At this point we are fairly on the threshold of Herbart's Analytic Psychology, the most important part of which is occupied in examining the interaction of the highly complex groups with each other and with sense-perception. The treatment of this part of the subject must be reserved for a second article.

(To be continued.)

II.—SPACE AND TIME.

By Alexander F. Shand.

In an article in the last No. of Mind (pp. 231-43) I argued that the objects of many fundamental kinds of knowledge transcend the Unity of Consciousness. I shall now consider, what I then excepted for independent treatment (p. 234), the reality which, in our knowledge of them, belongs to Space and Time. As the problem concerns the nature of this reality, it is not psychological but metaphysical. Of both I shall first assume, and endeavour to follow out to its consequences, the subjective doctrine, that they are images or forms constituted by the individual subject, and real only for it. First as regards Space.

From our representation of Space it seems, as Kant says, that we can think away all objects—all actual motion, solids, figures, lines and points. We appear to reach a homogenous unity, inseparable, indestructible. But this pure form of Space can have no parts; for I can only represent a part, and distinguish it from surrounding space, by drawing a figure, or suggesting it by a series of muscular sensations, or most vaguely of all by a concentration of attention. Nor has the pure form of Space any dimensions. We cannot realise the depth of Space without line. We plunge into it mentally; but this movement becomes a line, as we combine its points in unity. The breadth and height of it seem to stand facing us without requiring any linear construction. But the vaguest distinction of breadth from height requires two lines to be suggested in some way which intersect. We must then conclude that, if we succeed in banishing all line and figure from Space, we produce an image which has neither parts nor extension. Whether this is what the perception of Space once was, and its differentiation into a sum of extended parts an aftergrowth, or whether there was a vague extensiveness present to it in the beginning; whether again we can succeed in reaching this pure form of Space, or whether there is not some subtle movement of attention, or difference of form, ever playing upon its surface,—are psychological questions, which we are not here concerned about. My present contention is, that the possibility of Space possessing parts and dimensions

depends on line and figure, which we yet habitually regard as its accidents. This is the first contradiction which the subjective doctrine brings us to. It is impossible to consider that there are only those parts of Space which we represent by figure, and that they are only real when represented. Yet we must admit that, directly the figure ceases, either by being merged in another figure or by withdrawal of attention, the part ceases for consciousness; and, directly the figure moves, the part moves also or disappears. True, when we deny the continued reality of the part, imagination at once returns to recreate the figure, to refute us; but this at best gives only an intermittent reality.

I shall now attempt to give a general view of the different contradictions which result from this doctrine. The Space of perception or representation is always limited. Now every limit does not imply a consciousness which transcends it, or we should indeed attain to an intuition of infinite Space. If we look at the limit which a figure marks out in Space, we see that it involves a consciousness beyond it. But the limit which is imposed upon our finite perception or representation as a whole is different from that of its parts. It is a limit which binds all consciousness to the finite. Up to it I am conscious, beyond it unconscious; near it my consciousness fades, at it ceases altogether. It is in this way that our consciousness of Space is limited. Now we notice that when we turn attention to this limit it ceases to be the limit, and becomes the centre of consciousness, and to and beyond it are constructively added fresh parts where there were none before. Still, however far the subject carries its activity in transcending former limits, the space which it combines in unity with itself is always limited, and its potentiality of transcending any given limit never becomes a potential infinitude. Even the power of inflation which it has is deceptive. For as it adds the parts G, H, K to D, E, F, so the parts A, B, C drop away from it. This sentence involves the third contradiction. The parts of Space do not eternally coexist, but temporally, and at times exchange their coexistence for succession. Thus the parts A, B, C coexist, but if I pass to the limit C to create the fresh parts D, E, F, these appear successively; likewise the contiguous parts G, H, K and, as I attend to them, A, B, C pass out of existence successively in that order; if I return to the limit D, they are recreated, but in the opposite order, C, B, A. The parts of Space, then, are not unchangeable, but subject like their content to the categories of Becoming

and Ceasing. The becoming of a part of Space is, so far as consciousness is concerned, its gradual creation out of nothing, into which, after a longer or shorter interval, it fades and ceases, the only condition being the movement of attention towards or away from its limits. This involves the last contradiction. Degree of intensity, the characteristic of all consciousness, must belong to the parts of Space, which are now fading, now increasing in vividness.

To sum up results. Space is limited, but the subject can transcend any given limit, on condition that it contracts other limits. It is composed of parts and dimensions when the subject distinguishes line and figure within it, but those only which it distinguishes. Its parts have no permanent reality, nor when real do they always coexist, but indifferently precede or follow one another. They are subject to the category of Change, and, like all subjective objects, to degree of intensity. These results are in irreconcilable opposition to the following self-evident and necessary judgments—that Space is infinite; that its parts and dimensions are independent of the figures and lines by which we apprehend them; that these dimensions are eternally fixed, and these parts eternally coexistent and inseparable; that neither in part nor whole is it accessible to change, and that the varying intensity of its image is wholly subjective; that it is the subject which comes to be conscious of it, not it which comes to be; that it is the subject which successively apprehends its parts, too manifold to be combined in one consciousness by its feeble activity, not they which successively exist. All along the line of these propositions Judgment transcends Consciousness, and recognises no limitation to the image of Space within it. It is not the perceived or represented space that it affirms to be infinite and unchangeable; it is not the subjectively conditioned image of the parts of Space that it affirms to be necessarily coexistent, but it is the Space which extends beyond the limits of consciousness, and the unchangeable reality of which can be in no way affected by the appearances which it assumes in it.

I do not then, as yet, find myself with Lotze compelled to surrender the ordinary view of Space, on account of the difficulties which it involves; on the contrary, it is the impossibilities of the opposite doctrine which force me to accept its substantial accuracy. This is the negative evidence for the ordinary view. The positive evidence for it is found in those necessary and self-evident judgments which affirm it.

I shall now endeavour to follow out what I may call the Objective view of Space, to substantiate it without any reference to a subject finite or infinite, to lay bare its difficulties and apparent contradictions, and to estimate whether these are real and insuperable, or are not rather due to a confusion of thinking. I shall first consider its difficulties to the Idealist, and then those which are suggested by the doctrine itself.

As the first principle of the German schools of Idealism is the synthetic activity of the subject, so it is an insuperable difficulty to them to be asked to think anything real or knowable apart from its activity. They feel themselves cast upon a disordered and disconnected manifold. As Lotze asks,[1] How can the parts of Space undertake the functions of a subject, come into relation, fix their own position, and, above all, being each one internally the same as every other, yet set up necessary distinctions among themselves? In every question there are assertions, and in every assertion presuppositions, which may not all have been foreseen and criticised, which it is better to try to lay bare than to rush heedlessly upon an answer. Most of the questions which we ask ourselves in Metaphysics are suggested by the obscurity and confusion in which our thought at first lies, and out of which it gradually struggles to the light; which if we had in the beginning, we should never ask them. This is the case with the question under consideration. The presupposition is, that in every manifold the unity is something superinduced upon it, and not belonging to or due to it; for "a plurality of things cannot of themselves unite in one relation, nor can a single thing of itself bring itself into a multitude of relations".[2] The Unity of Space is superinduced upon the parts and even the constitution of the parts as such, that is, as different one from another, is not due to themselves; for, difference being no quality of any of them singly, how can it subsist when there is no relating activity to combine them?[3]

When Hume, in carrying out the Principles of Association, dissolved knowledge, as it has been forcibly and picturesquely expressed, into a chaos of fleeting and unrelated sensations, the great work of Kant was to reconstitute it by drawing attention to a principle, which had been overlooked, that must precede all association—the synthetic activity of the

[1] *Metaphysic*, §§ 110, 111.

[2] T. H. Green, *Prolegomena to Ethics*, ch. i.

[3] Lotze, *Metaphysic*, § 80.

subject. But what has not been noticed is that, while on the one hand the principle is only necessary in consciousness, on the other hand much, which is undoubtedly real for us, cannot be combined in its unity.

The error lies in confusing or identifying the bond of union in consciousness with the bond of union beyond it; either in supposing that the latter is an activity analogous to ours, or in confusing the two worlds together and bringing all that can be known by us under the activity of the individual subject. Hence, when this bond of union, essential in either case, is rejected, its advocates hand over to us a disconnected manifold, and tell us to combine it. Were I forced to accept it, I could indeed conceive of nothing but a spiritual and active principle capable of the task. But if I answer that on their own conclusive showing such absolute disconnectedness is unthinkable, they rejoin that it is so for the very reason that the work of thought cannot be got rid of. This, however, is just the point in question, whether there is no other connecting principle but Thought. Such a principle I find in Infinite Space. I do not think it first disordered and unrelated, and perplex myself by trying to understand how its dead isolated members come into relation. I do not have to evoke any *active* principle; there is nothing for it to perform. For through all Time the manifold parts of Space are combined in the infinite unity thereof, in relation to one another, and all are eternally fixed and different.

I have shown what I think is the source of the main difficulty to the Idealist. Any fuller account of the Unity of Space I defer until I have considered Time. We have now to notice the difficulty connected with the parts of Space. How can I affirm them to be different without contradiction, seeing that each one is internally the same as every other? I am putting the question in a new form. I do not ask how this difference is produced? We have found this conception of activity untenable. The parts *are* in relation to the whole; the question now is, whether being internally the same they can yet be different. But this inherent sameness is again an assumption. Space may be composed of parts of which each one is different in shape and magnitude from all the rest. It may also be the sum of any other parts. Further, these different modes of dividing Space may be all real together. Space may be the sum of infinitely small spaces, and these may be again included in larger spaces of different form and magnitude. Now it is, no doubt, easier to appreciate the difference of the parts of Space when they are

internally different. As regards our perception, we could never identify any part of Space, or know what part we were in contact with, were they all alike. But even in this case we should have to affirm that these parts, similar to all appearance, were in reality different. This essential difference is nothing subjective. It is not due to the quantity and quality of the muscular sensation, which we feel in passing among the parts. It is not due to the movement of attention and its estimate of the relative lapse of moments. This difference is subjective, and presupposes the other. If the part D were not really beyond C, and C beyond B, we should not feel a greater number of sensations in passing from B to D than in passing from B to C; and if from B to N and B to S were not real differences of direction, we should not feel qualitatively different sensations in passing to them. Under the exigencies of a special theory this subjective difference may be explained as due to a modification of state of unspatial realities, and on the subjective view it is the best explanation; but it is forced and artificial compared to the other.

But I have not yet reconciled the supposable inherent sameness of the parts of Space with their difference; and there is another difficulty connected with the latter which I have to notice. Let ABCD to N represent a division of the real Space into similar parts. Now A, whatever it may have in common with BCD to N, is an individual part different from all other parts. As I pass to BCD, I find each of them also is an individual part different from all the rest. The category of Individuality or Distinction does not distinguish but confuses them, and no other category can succeed where it fails. Now, if we consider this apparent contradiction, it becomes obvious that it is owing to an often noticed feature in language, that it expresses what is general but not what is singular. When I predicate individuality of ABCD to N, I am applying no mere conception, though language belies me. In each case the individuality is itself different. For I affirm A to be different not from a mere conception—others, but from BCD to N; B, again, I affirm to be different—not from BCD to N, which would distinguish B from itself, and identify it with A—but from ACD to N; and likewise of CD to N. Thus the 'others,' which each part is different from, is no conception, but the opposite of conception; in each case it includes what it excluded before, and excludes what it included.

Now in the symbolism I have used it may seem an improper advantage to represent similar parts by different

letters, by which I introduce, at least into the symbols, that internal difference which I am by way of excluding from the realities. AAA to N would be a more correct representation, and then all use of the symbols would vanish. But in truth we can only doubt the essential difference of the parts of Space when we abstract them from the whole of which they are the parts. Each may be the same in itself—that is, in form and magnitude—but each is a part of a whole, and each occupies a quite unique relation to the whole and to all other parts. In this lies its difference, and this difference of position is in no way inconsistent with its internal sameness. Again, each part *is* a place—not *has* a place; we are not localising it in another space: the movable object in it *has* the place, *it* is the place—and this place is not the same as, but essentially different from, any other place in the whole of which they are members.

I will turn now to the Space in consciousness. The parts which I represent there by figures, Judgment too asserts to be independent of them, to have a permanent and unbroken actuality, though the figures and my combining them in consciousness are occasional. True, when I distinguish the parts, it is on condition that I hold them together in one consciousness and, passing from one to the other, compare them. But their difference antecedes the consciousness of their difference, and is wholly independent of it. In fact, it is just because of the necessity or permanence through all time of these relations that I cannot refer them to myself, which now combines one manifold, now another, and gives to none more than an occasional actuality. Hence, while Kant considered that the individual subject produced objective relations—that is, necessary and universal relations—I can only find it producing subjective relations, which are fleeting and intermittent; but this point I will not follow out.

Thus, even the parts of the finite space in consciousness, we have not been able to limit to a reality for the subject. We come now naturally to the question, What relation does this space bear to the real Space without? We have to consider the doctrine, that on the realistic view Space must still be considered quite distinct from that imperfect copy of it in consciousness. In fact, the latter is just this, a copy or reproduction of the former. The artificiality of the subjective view is therefore supposed to attach equally to the objective, since in either case the space in consciousness is a production of the individual subject. Were I forced to accept this position I should still have in the self-

evident judgment the assertion of an infinite Space not dependent on consciousness. But the Dualism would be a startling one to contemplate. There would be an absolute gulf between consciousness and this infinite Space. No fragment of the latter could by any possibility be united in the former. They would be two worlds utterly out of touch, and the pretension of Judgment to make anything known of a world absolutely unknown to consciousness would seem strange and dubious. But here, as nearly everywhere else, our difficulty is the result of a confusion. Between the space in consciousness and the real Space without we place a great gulf, and quite forget to note that this gulf is spatial. In imagination we take a small surface of Space and place it on the retina, or further inwards *vis-à-vis* with the individual subject, and think that we have taken it out of Space altogether. What is only a spatial separation we confuse with an unspatial separation. The subject, coming to be conscious of a part of Space, fancies this finite portion to be out of real Space; but it is connected by no act of its own, and can be broken by no act of its own. It cannot on an impulse from spatial or unspatial realities build up a finite space within itself, which, while it must be in the one infinite Space, is nowhere in it. Is there then nothing which can separate the space within us from the Space without? Driven to desperation, we may interpret the gulf of division as a consciousness. But this can alter nothing. The two spaces must still be continued till they meet, and an unextended something cannot stay their union. To conclude, we have seen in the first place that it is impossible to refer the finite space in consciousness to the individual subject's activity; in the second place, we find that this is because it is part of the infinite Space beyond, from which it cannot be separated.

I now turn, finally, to what seems to me the chief difficulty of the objective view of Space. I have carefully avoided implying that there are actually in it moving and changing objects; for this problem I am not concerned with. On the other hand, I do not assert that Space has any actual reality apart from its content. I leave the question untouched. Now, the difficulty arises from ascribing parts to Space—not from asserting that they are different, for *if* there are parts they must be different. The difficulty is twofold. In the first place, what are these parts? They may be of any and every form and size. We seem to have to exercise a discretion what to determine on. In the second place, how can the infinite unity of Space be multiplied into

finite spaces where there is no figure of any kind to produce this limitation? But, indeed, were figure real, it would not help us. For such a changeable thing, though it could limit a space, could not fix that limit perpetually. Finite Space is then not dependent on figure, nor produced by it. But here we are apt to be deceived by a false conclusion. We think that, if there is this dependence, when the figure ceases the part will also, and a hole or gap be made in Space. Now, though the part would cease, so far as to become merged in surrounding Space on account of the destruction of its limits, no such gap would result. This supposes the figure to continue, under the form of which alone the gap is conceivable. Though then there would be no mutilation to Space by the annihilation of all figure, which in no way creates the Space it limits, yet all these limited spaces would be merged in the one infinite Space, with the result that it could have no parts ascribed to it, unless there are other means for its multiplication. Leaving this matter unsettled for the moment, I pass to another attribute of the real Space. We think of it as possessing an infinite number of directions, extending to infinite distances, passing from everywhere to everywhere, containing in themselves its three dimensions. These directions we can only represent in consciousness by lines, as the parts by figures. But here a marked and unsuspected difference occurs between the two cases. For we cannot think the multiplicity of these directions as being merged and disappearing in the Unity of Space, when the lines which represent them disappear, or when no object traverses them. The directions cannot lose their individuality and difference. They are fixed and settled without resting on any doubtful discretion of ours. There is nothing arbitrary in them, as in the shape and magnitude of the parts of Space. It is easy to realise that but for this difference of the two cases we should have been brought to a real contradiction. For the dimensions of Space are fundamental to it; without them it would no longer be Space or Extension. But the distinction was not a sophistical one, produced by a desperate effort to avoid it, but was quite unforeseen. To return to the parts of Space. If we think it essential to Space to have fixed and unchangeable parts, this thought of its possessing an infinite number of directions will remove our difficulty. For these infinite directions crossing everywhere themselves set limits in Space, and multiply it into an infinite number of parts, unchangeable because they are.

I now pass to consider Time, which I shall first suppose subjective.

As with Space, so with Time, if we regard it as only real for consciousness its limitation is obvious. We cannot complete the successive synthesis, as Kant says; for, as Lotze adds, it is impossible to sum up an infinite in a finite time. However the subject endeavours to combine into unity with itself the unity of Time, what it attains to is but a fragment. Yet can it not think this fragment as the whole, but must judge it connected with a before and after, if it would avoid contradiction. The question is how we are to interpret this transcendent portion on the subjective theory?

The events which are passing within me are only possible in Time; that is, they each occupy a duration or part of Time. But they pass and other events succeed them, enduring in their stead. What is this Past? The judgment asserts that before the duration of which I am, there was another which I am not, conscious. Now if this judgment asserts the reality of a past, which transcends the Unity of Consciousness, I must pronounce it false. But I may endeavour to bring it within consciousness. I may say that in asserting it I unite it with myself, and transcend a distinction which I the subject alone have set up. Let us suppose that it can embrace a fragment of the Past; more than that we have seen to be impossible. This past is then only real when I assert it or recall it; its reality is intermittent. Further, I can only recall or combine it in the present, in the duration which now is. This past, then, is only real so far as it is present. But the Past is not the Present, nor can it be confused with it, nor interfered with in its necessary antecedence to it without contradiction. But there is yet another contradiction. When I pass from the present duration to connect it with a past, and follow out this past from its connexion with the present, this past, so far as consciousness is concerned, instead of being antecedent to the present, is consequent upon it. For as the present duration ceases, that which becomes present in its stead is always after it, and never before it. To this rule the activity of the subject must conform, and, as it passes beyond the present duration, the duration it connects with it must always come *after* it, and can never be made to go *before* it—must always be the future coming into actuality, and never the past returning to actuality. At most it can only clothe the coming moments like the moments that are past, and for ever past.

We are then beset by contradictions on either hand,

whether we regard the Past as real or unreal. For we cannot gather up the past, the object of our judgment, into the unity of consciousness without contradiction, nor, on the other hand, can we assert that the Present is the absolute beginning of Time, and that before it there was no time—no before. Now this 'before,' this Past, we cannot affirm to be actually real or Present, but just as little can we deny that it is real as Past. Yet our objection to ascribing reality to it often proceeds from confusing its reality with the reality of the present. The latter is before us with its clearness and fulness of content, and seems to monopolise reality. We ask where the Past is? We seek it in the world without. We try to represent it as lying alongside of the Present far far away. But we find no vestige of it. For the world is dominated alone by Actuality and Becoming. We say, then, it is some artificial projection of our own minds.[1] But we find as little trace of it there. Truly such an attempt we seek rather than are able to carry out—an attempt which is dissolved in and neutralised by contradiction.

When we pass to consider the Future, we find that we are as much involved in contradiction on the subjective doctrine as in interpreting the Past. We cannot grasp it in consciousness. For though what is and is coming to be may be combined in its unity, what will be but has not begun to be cannot. If imagination try to hasten time to come and to seize it, it attains only to what we call an anticipation of the future. Now this only takes place in the present. If the Future is real for consciousness only, it is there real only as Present. But as little as we can bring the Future into unity with ourselves can we deny it. We cannot regard the Present as the absolute end of Time. We cannot without contradiction assert that after the Present there will be no time to come—no 'will be,' no 'after'.

There is another contradiction involved in this view, which I must notice. It is supposed to give a kind of objectivity to Time, in affirming it to be the form of all individual minds. But the time which an individual possesses must be a different reality to the time of any other. For my time is subjective to me, and therefore is not capable of separating from me, and migrating into another consciousness. If it were capable of doing so, it would leave my consciousness a blank, without the possibility of events

[1] Lotze, *Metaphysic*, § 155.

occurring in it. But what we suppose is, that as I produce time out of my inner activity, so do other minds produce similar images out of theirs. It is the harmony of these different times which is the strangest thing of all. Why should the present time for me be the present time for them? They might be cast in a time which though present for them is past for me; or they might live in a future, which is only approaching for me, though actual for them. We could never touch hands across these time-distances. We should dwell apart like spirits in different worlds. Now this which appears possible we shall find to be a necessary consequence of the doctrine when we strictly apply it. For if I reflect on any time or duration, and think of different durations subsisting somewhere else, I must arrange these different durations either before or after one another, in which way alone can I think of them as different. It is because the finite Unity of Consciousness is embraced in the objective Unity of Time that the duration which is actual and present to one mind is actual and present to all.

I must, then, surrender the subjective doctrine of Time by reason of the contradictions to which I am brought. For it is opposed to necessary and self-evident judgments in its reduction of Time to a finite duration, and in the clean sweep it makes of Past and Future, which it must either deny altogether or confuse with the Present. Therefore, I cannot accept the half-way house which Lotze has set up for himself. For it is not able to account for the reality of Past and Future.

I shall now endeavour to follow out the Objective view of Time, so as to realise what its difficulties are, and if there are any latent contradictions in it. I shall work up by an analysis of Change to a more precise knowledge of its nature, of its relation to consciousness, and of the part of its infinitude which consciousness can combine in unity with itself; leaving the result to justify the method.

The simplest knowledge of Change from commencement to completion involves a manifold of judgments. I shall not try to explicate them fully, but those which are characteristic of it may be expressed by the following symbols:

1st Stage. S is P; S is not Q; S will be Q.
2nd Stage. S is ceasing to be P; S is becoming Q.
3rd Stage. S is Q; S is not P; S was P.

In the second stage Ceasing and Becoming are necessarily united. For in a Ceasing which involves no positive Becoming, and in a Becoming which involves no positive

Ceasing, there is still a negative Ceasing or Becoming. Thus in the first case the new Present, which is distinguished from the Past by absence, has *become;* and in the second case the old Present, which is distinguished from the new by absence, has *ceased.* Now the complex judgments 1, 2, 3 conflict. They would be untrue and impossible in the same time; they are only possible in successive times. I cannot combine 1, 2, 3 together in one consciousness, but only the manifold of each one separately and exclusively of the rest. 1 is the stage before the commencement of the change, and 3 represents its completion. But 1 cannot be followed by 3 without the intervention of 2, which is a middle between the contradictories S is P and S is not P, that cannot possibly be excluded. In it S is neither P nor Q, nor the negation of either, but only ceasing to be one and becoming the other. In every consciousness of Change this stage must be combined in the Unity of Consciousness. Even where a process of change is too extended for entire combination, the parts which are combined still express Ceasing and Becoming. Now, it is important to notice, that 2 the process of Change involves a complex of judgments in which the stages 1, 2, 3 are repeated. For, to take only one side of this complexity, S in ceasing to be P is resolvable into S is P^1, S is P^2, S is P^3, &c. Thus, if P is the place which a body S is ceasing to occupy, it is successively in the places P^1, P^2, P^3. But the dynamical stage 2 has not been excluded. Change cannot be resolved into a series of motionless actualities. For S, in order to occupy P^1, P^2, P^3, must pass through the stage of leaving each one and coming to the next. Each of these lesser stages of ceasing and becoming is again further subdivisible. But the judgments which they involve are not explicit. They do not enter into the Unity of Consciousness save on reflection. But when rendered explicit they are found to truly express the complex nature of change; and they enrich the conception we form of it. So when I watch the smoke curling up the chimney or listen to the clock ticking, the complex processes of change are not distinguished into lesser changes, divided by actualities or products of change. For these actualities, as they do not stand out as a completion of change—as in any continuous process of change they are not actualised *for* a time, but only *at* a time—are too subtle to be taken note of by the subject in its immediate experience of them. Thus what the subject combines into unity with itself in its consciousness of change is neither very minute nor very extended.

Now the process of change occupies some duration, being

in this unlike its momentary products, which in a continuous process occupy no duration. And here a distinction is obvious; the process is not the time which it lasts. Innumerable different processes can occupy the same time, but if they were all the times which they lasted, they would all be different times, instead of referring to the same time. Hence in the consciousness of the process there is combined, what is distinct from it, a consciousness of the time which it occupies. Therefore we are not confined to a bare point of the present, in which case the consciousness of change would be impossible, but extend over a real duration.

Beyond and on either side of this limit to time in consciousness, Judgment affirms the continuation of time to infinity.

Now the difficulty arises whether, while S ceases to be P and becomes Q, the duration M which it lasts ceases also, and a new duration N becomes in its stead; whether, that is, the 3rd stage S was P, S is Q, involves the judgment M was, N is? Now if the duration M does not pass with P, P in ceasing to occupy M must come to occupy another duration L, since it cannot pass out of time altogether. This L cannot be an actual duration like M; else P, instead of ceasing to be, would continue actual, in still possessing a present duration. L therefore must be a past duration, a duration which was actual, which has therefore passed through the stages of being actual, ceasing to be actual, and becoming past; and if L why not M? But this, though a plausible, is not a necessary inference. However, since L has been present, M has not been always present, for two durations cannot both be present—one must go before, the other after: M therefore has become present; surely then it must cease to be present? But this, too, is not a necessary inference. Again, when Q has become and P ceased, Q either goes on to cease in its turn or remains Q; in either case it occupies a duration. But this is not the duration M. For P was in M; but P and Q cannot occupy the same duration, or they would be both actual together. Q then occupies a different duration N. But Q is present or actual, N is therefore present. Now N and M cannot both be present together. Therefore, when N has become, M has ceased. But N has become when Q has become, and Q has become when P has ceased. Therefore M has ceased when P has ceased. I conclude, then, that P when it ceases remains in M, which ceases also, and does not pass into another duration L. I think I have shown, by following out the opposite conception, that Time is not a fixed and motionless form through which events

pass; rather, like the ceaseless swell of an ocean, it rises and falls continuously.

But this change does not affect the whole of Time. As P ceases, the duration M ceases; as Q becomes, the duration N becomes. When N is, M was: M has changed, but can change no more—it is petrified in the dead past. Again, as M is ceasing, N is becoming and will be. But O, which comes after it, will be, but is not becoming. The Future, then, which is not in process of becoming, is fixed *for* a time—it only will become. Again, change does not affect the order of the parts of Time; M is always after L, and before N.

Another difficulty rises here. Suppose that S is Q, and remains Q for the duration O without further change, does O remain unchanged in correspondence with it? Here we seem to be in a dilemma. For it would be a contradiction to suppose that O ceases before Q, since by our supposition it is the whole time which Q lasts. But, on the other hand, we get into difficulty if we assert that O remains fixed *for* a time, or, more correctly, since it is not located in another time in the background, that O is a fixed duration. For Ceasing and Becoming are continuous. If they were to pass, and to be succeeded by a statical condition of Time, what is to renew them? This is a legitimate question to ask, for Time has not been always motionless. But there is another and more immediate difficulty. If Q by persisting unchanged can petrify O, O in its turn will render impossible any changes which might be synchronous with Q in O; because in ceasing they would have to pass into the preceding time M, which we have seen to be impossible. But this is no real dilemma. For O, the duration of Q, is resolvable into the smaller durations O_1, O_2, O_3 . . . &c. Now, *at* the moment that Q has become, O_1 has become, and it is at the same point of time that O_1 begins to cease, and O_2 to become; and so of the other parts into which O is resolvable. Only when O_n is reached, which is the last fraction of the whole duration O, does Q begin to cease. Ceasing and Becoming is then continuous, and the duration of Q is this group of time-changes from O_1 to O_n.

Now what are the parts or durations into which this group is divided? There is no preliminary difficulty as to there being parts, as in the case of Space. For the one actual duration is necessarily different from all the rest; and they are necessarily different, in so far as they *have been*, or *will be*, actualised each one separately before the next. But the question is as to the nature of the parts. Now, however

small a finite duration is, I must affirm points in it, *at* which its several parts have become one before the other. Hence the parts, of which it is ultimately composed, must be infinitely small. These parts, it is obvious, altogether elude the unity of consciousness, and must elude it. Yet only one of them is actual or present at a time. Thus the real Present, like infinite Time, transcends the activity of the subject, and the present, which it combines in consciousness, is but the confused image of a number of infinitely small successive times, compounded into co-existence like the rapid revolutions of an object in Space, owing to its want of separating and distinguishing energy.

I must now turn to a difficulty connected with these infinitely small parts. M is necessarily before N, but how is this reconcilable with the assertion, that when M is ceasing N is becoming. Here are two durations in necessary and synchronous connexion. For if the ceasing of M did not involve the becoming of N, then when M had ceased a new present N would not be ready to take its place, as there can be no actualisation without becoming, and a veritable break would occur in Time. But the mere expression of such an opinion discovers a contradiction: the 'break would occur in time,' that is, time would *not* be broken, but only some connexion of events in it. The union of M and N is then synchronous, and the union of M and N is successive, but it is as ceasing and becoming that they are synchronous, and as actualised that they are successive. For when M has ceased, then, and not till then, has N become, that is, N has become after M has become, and at the point of time at which it has ceased.

I shall now conclude what I have to say on Time with two remarks. It is impossible with regard to it, as with regard to Space, to assert without contradiction, that the Time in consciousness is the reproduction of a real Time without. We can put no gulf of division between them which is not itself a part of Time. The time in consciousness is then a fragment of infinite Time, but a fragment of which all the minuter parts escape consciousness.

This points to the next remark, that it is impossible to break up the Infinite Unity of Time. Time is not first a scattered manifold of parts which are combined afterwards—in another time—in unity. Its combination does not rest with the individual subject, which reaches but to a small portion of it. Its Unity is not anything produced, which would require a time in which to produce it. Its parts *are* necessarily united with the whole and different from

one another. Such a Time is the bond of union of many minds, and of their past history and future. It is also the unity of all that is actual in Space with its past and future. Space as an eternal actuality is then in Time, but not Time in Space. Time is the 'will be,' the 'is becoming,' the 'is,' the 'is ceasing,' the 'was'. The 'is' is the base-point of the present, which is *at* but not *for* a time. But the present duration is the united 'is ceasing' and 'is becoming'; the past and future duration, the Ceasing and Becoming which was and will be. Thus Time as a whole is a Becoming and Ceasing which continues ceaselessly, which was, and is, and will be.

Here I conclude, not because I think I have said all that I should say on this matter, but from limitation of view, which always sets a limit to metaphysical inquiries. The fundamental problems which I have not fully investigated but which are yet involved in both papers, are the relations of consciousness, judgment, and their objects; the subject to which both are referred; the nature of self-evidence; the peculiar relation of representation to its object, and conception to judgment. These are the difficulties and problems which are most clearly involved in the foregoing, but of course they are not all; for in the treatment of any separate question in metaphysics there lies dormant and undeveloped the whole theory of metaphysics. Without farther development the position, which I have in the main only drawn in outline, cannot be fully justified. For though I have endeavoured to rely on judgments alone which are self-evident or necessary, yet I know how deceptive words are, how protean thought is, and how hastily the intellect seizes unjustified conclusions and confuses issues. Therefore I am in complete agreement with the German school in this, that without working out a philosophical position to all its consequences, without unveiling and testing its presuppositions, and without re-solving its difficulties and contradictions, none can be considered completely proved or satisfactory.

III.—THE PHILOSOPHICAL IMPORTANCE OF A TRUE THEORY OF IDENTITY.[1]

By Bernard Bosanquet.

I should like to explain very shortly why I have chosen this particular subject. Those of us who are especially accused of being interested in German philosophy are tempted either to give battle along the whole line, as by discussing the nature of reality, or to make everything seem all the same in all systems, as may easily be done by a sympathetic treatment of any special subject. I was desirous, if I could, to select a point which should be important in its bearings, but yet perfectly definite, so as to be explained, I hope, with some approach to precision. I believe myself that this is the *only* fundamental question which is or ever has been at issue between distinctively English thinkers and German idealist thinkers as such; but when I say the *only* question, of course I include in it its consequences, and it is the object of this paper to indicate very briefly how far-reaching these are. Other alleged differences, such as the distinction between *a priori* and experiential philosophy, or that between a belief in the absoluteness and in the relativity of knowledge, I take to be pure misunderstandings.

In order to state the question precisely, I will take it first in its logical form, although in this particular form English writers have sometimes seen and satirised the absurdity of the view which, in my opinion, they accept in all other provinces of philosophy.

The logical law of Identity, A is A, is susceptible of many interpretations; but they all fall, I think, between two extremes. The one extreme is to take the principle as a demand that in every judgment there shall be some identity or positive connexion between subject and predicate, which is merely symbolised by the repetition of an identical letter. This view we need not trouble ourselves with; it is nothing at all unless further explained. But the other extreme is to take A is A as a statement of the sort of identity which the judgment aims at; *i.e.*, as a type of the fullest, completest, most thorough identity, compared with which the identity in an ordinary intelligible judgment is incomplete and falls

[1] Read before the Aristotelian Society, January 23.

short of being genuinely identity at all. Hamilton's statement (*Logic*, i. 80) is of this kind. The law of Identity means 'Everything is equal to itself'. I should state the view then which I propose to apply and to controvert as being that perfect identity consists in the entire exclusion of difference.

The importance of this view consists in its atomic tendency. If we were to attach moral implications to theoretical views, this doctrine might be burdened, more fairly than materialism, with the chief associations which are supposed to be objectionable in materialistic conceptions. I say this by way of illustration of its importance, and not in the least believing that such associations ought to be introduced into philosophical reasoning. But the ground for connecting any such associations with this ideal of perfect Identity without difference lies in what Plato would have called its *eristic* character, that is, its tendency to exclude from judgment, and therefore from truth and knowledge, all ideal synthesis. Not, of course, that ideal synthesis ever has been or can be excluded from judgment; less deception would be possible if this were so; but what may and does happen is that an arbitrary line is drawn across various contents of knowledge, and their identity is denied from the point at which some little effort or some little education begins to be needed in order to recognise it. In fact all ideal syntheses which we can find out to be such are pronounced to be fictions.

If we take A is A in the sense to which I object, as meaning that the real type which underlies the judgment is an identity without a difference, we simply destroy the judgment. There is no judgment if you assert nothing; and if there is no difference between predicate and subject, nothing is asserted. Of course in "A man's a man" we make some difference between the two terms: one means man in his isolation, the other man in his common nature, or something of that sort.

If I were asked how I should represent a true Identity, such as a judgment must express, in a schematic form with symbolic letters, I should say the problem was insoluble. Every A is B would be much better than Every A is A; but as the letters are not parts in any whole of meaning, they are things "cut asunder with an axe," and such a formula could only correspond to a proposition like "London Bridge is one o'clock," *i.e.*, to a spurious judgment, which would be mere nonsense.

One might try Every A is AB, which would be suitable

in some respects; but then what is the use of repeating the A when you have it once already in the subject? The whole difficulty would arise again in endeavouring to explain the connexion between A and B in AB; and besides a qualification in the subject would be demanded to account for the qualification in the predicate, and we should have to recur to AB is AB. In point of fact the letters taken as mere letters are atomic existences, and the judgment cannot be represented by their help. If they are used algebraically, *i.e.*, for elements in a numerical whole, the question is different.

What then is Identity? The judgment is the simplest and perhaps the ultimate expression of it. An identity is a universal, a meeting-point of differences, or synthesis of differences, and therefore always, in a sense, concrete. Or we may speak of it as the element of continuity that persists through differences. We may illustrate this idea by comparing it with Locke's notion of identity. "In this consists identity, when the ideas it is attributed to vary not at all from what they were that moment wherein we considered their former existence, and to which we compare the present" (*Essay*, Bk. ii., ch. 27). In spite of this demand for the exclusion of difference, Locke gives a very fair working account of personal identity, by limiting the points within the personality which do not vary, and ascribing identity in virtue of them. But he forgets that these points are not isolable from differences, and cannot be treated as identities simply on the ground of their not varying. If a thing is pronounced truly identical with itself only in as far as we exclude the differences of its states, attributes and relations, identity falls into tautology, which is really incompatible with it.

Let us take such a judgment as "Cæsar crossed the Rubicon". In order to give this its full meaning we must not try to cut it down as Lotze in one place does (*Logic*, § 58), reducing Cæsar to mean merely a creature that crossed the Rubicon; this would be A is A again. Precisely the point of the judgment is that the same man united in himself or persisted through the different relations, say, of being conqueror of Gaul and of marching into Italy. The Identity is the Individual or the concrete universal that persists through these relations. And if you ask what in particular this is, and try to whittle away the differences and leave the identity, you will find that when the differences are all gone the identity is all gone too. In the case of two outlines which partly coincide, you cannot speak of the coincident part as the same except by an ideal synthesis which identifies it first with one of the two outlines and then with the other.

Identity, then, cannot exist without difference. In other words, it is always more or less concrete; that is to say, it is the centre or unity or continuity in which different aspects, attributes or relations hold together, or which pervades those aspects, or persists through them. It is quite accurately distinguishable from difference in known matter, but it is not isolable from difference. The element of identity between two outlines can be accurately pointed out and limited, but the moment they cease to be two it ceases to be an identity.

This is the most vital point of recent Logic. The universal is no longer treated as an abstraction, but, so to speak, as a concretion, so that violent hands are laid even on the inverse ratio of intension to extension. We can no longer see why the universal, within which a certain element falls, should be more abstract than that element; why, for example, the state should be a more abstract existence than the citizen.

A very good instance of this way of looking at universals is the treatment of proper names [1] as indicating universals, because they indicate persistent subjects. Most people have some sort of *schema* which helps them to handle their philosophical ideas. The traditional *schema* of the universal —even Mill's I should say, though he helped to show the way out of it—was, I suppose, extent of area. The greater universal included the wider surface, and was more abstract. The *schema* I should now use would be more like a centre with radii, or simply a subject with attributes, the greater universal having the more or more varied radii or attributes, and being therefore the more concrete. Such a *schema* is particularly in harmony with taking an individual as designated by a proper name for the example of a universal.

The recognition that a universal is an identity, and *vice versâ*, is to be seen dawning on Mill, who usually denies the operation of identity in inference, in a very interesting footnote in the *Logic* (i. 201) directed against Mr. Spencer, who answers it in *Psychology* (i. 62 note). Mr. Spencer is more of an atomist, I believe, than anyone else has ever been, for he says that the syllogism must have four terms; *i.e.*, the middle term is not identical in its two relations, but only similar.

The concrete view of the universal has a result antagonistic to the whole tendency which began with the class-theory of predication (closely connected with the law of Identity), and ended with Quantification of the Predicate and Equational

[1] *E.g.*, Sigwart, *Logik*, i. 83.

Logic. Of course these researches have been both curious and important; but in as far as they aim at reducing the judgment to an identity without difference, they are off the track of living thought. Jevons's idea of Identity is very difficult; I can hardly suppose it to be thought out. But what he says (*Principles of Science*, pp. 16-17) about the negative symbol which indicates difference, "or the absence of complete sameness," means, I think, that he considers difference an imperfection in identity. Jevons writes the judgment, "All Dicotyledons are Exogenous," as "Dicotyledons = Exogens," which he takes to mean, I suppose, that the two classes are composed of the same individuals; *i.e.*, their identity is in the mere sameness of the individuals. What this judgment really means is that in a particular kind of subject, a kind of tree, the different attributes of having two seed-leaves and of making fresh wood on the outside are conjoined, with a slight presumption of causality. The whole point and significance of the identity depends on the depth of the difference. So that though you can, under certain conditions, take the one term and deal with it as if it was the other, yet that is only a *consequence* of the real import of the judgment; the real point and import is to look at the two together, as united in the same subject.

In Psychology the difference between the conception of concrete and abstract identity shows itself in the theory of Association, especially in the attitude taken up towards the law of Association by Similarity. If Identity is atomic or abstract, *i.e.*, excludes difference, then you cannot speak of your present impression as being identical, or having identical elements with a former impression which, *quâ* former, is by the hypothesis different; and, consequently, you must say that the first step in Association always is to go from your present impression back to another impression which is like it, before you can get to the adjuncts of that former impression, of which adjuncts the revival by association is to be explained. This first step is Association by Similarity, which, according to what was till recently, I believe, the received English theory, must always precede Association by Contiguity; that is, the transition to those adjuncts of the former impression, the recalling of which by something in present consciousness is the problem to be explained. The *theoretical* question at issue is mainly the degree in which the processes of consciousness are homogeneous at its different levels. Association of particulars might lead up to Inference from particulars to particulars, but could never

lead up to the activity of judgment and inference considered as the interconnexion of universals.

The question of *fact* which is involved in this question of theory is one of extreme interest. It is whether we do, in what is called transition by association, go from the presented element to the quite different context which it recalls, through a distinct particular reproduction of a former impression similar to that now presented. If this is so, we go to Contiguity always through Similarity, and in doing so we revive our former impression (I adopt the language of the theory, though, if there is no identity, we cannot *revive a former impression* but only one like it) with complete exactness, just as if we were taking a print out of a portfolio. And the idea that we do this is attractive, because in some cases we appear to be aware of doing it in a striking way—of going right back into a former and similar state of consciousness, before we go on to the further adjuncts contiguous with that former state of consciousness.

But I do not think that this popular idea will really bear examination in the light of facts. It is plain that, as a rule, the element in present perception which sets up an association is not a particular complete in itself, and operative by calling up a former separate or self-complete particular resembling it. On the contrary, the element which sets up an association can be seen very easily (if we think of hourly, normal occurrences of the process, and not merely of striking examples in which a picturesque memory is at work), to be a characteristic *in* a present *complex* perception, not itself sensuously isolable, but identical with something *in* a former complex perception, and recalling directly, without intermediation of a similar particular, some adjunct of the former complex perception. And this adjunct, the idea whose reproduction is to be explained, is not itself a particular, but is a complex dominated by a type or rule of interconnexion, which does not appear in the mind with its old particular content, but with a new one largely furnished and modified by the present content of consciousness.[1] The more closely we examine the matter, the less we shall think that contents brought up by association reappear in their old form like prints out of a portfolio, or involve an intermediate reproduction of the old case similar to the new perception which starts the process. The illusion comes from seeking out

[1] It will be obvious to all who are familiar with the subject that I am borrowing largely from Mr. Bradley's chapter on Association in *Principles of Logic.*

very elaborate examples. The common cases in which association and inference can barely be distinguished are perfectly good instances, and show the continuity of the intellectual function. I hear a rumbling in the street and think that an omnibus is passing, or a double knock and know that the letters have come. I do not go back to the last particular rumble or postman's knock, or expect letters like the last which came.

The interest of those who believe in concrete Identity, in thus reducing the two "Laws of Association" to the one Law of Contiguity, is to enforce the idea that the content of consciousness is never merely simple or particular, and that in association, as in judgment, the universal or meeting-point of differences furnishes the true guide to the intellectual process.

This reduction is beginning to be accepted (*e.g.*, Mr. Sully mentions it, and Mr. Ward in some degree adopts it), not perhaps in the full sense here claimed for it, but merely as a preferable statement of the operation of ideas which are particulars. I doubt, for example, whether Mr. Sully has abandoned the Scotch or English ground of atomism in ideas. But to recognise identity as the universal makes the associative process far simpler, and homogeneous with the whole remaining evolution of consciousness.

In Ethical Philosophy the desire to exclude difference from identity produces analogous difficulties to those which we have noticed in Logic and Psychology. If, in short, difference is excluded from identity, how are you ever to get from one self-identical particular to another, whether in inference, or in association, or in moral purpose, or in political obligation? In the sciences that deal with human action the natural atom to start from is, simply putting atom into Latin, the individual human being. Of course an individual human being is a concrete universal, as we saw in speaking of what is meant by a proper name; but as his unity is pressed upon us by merely perceptive synthesis, we are apt to treat it as a datum, or to draw a sharp line between the unity of the individual human being, as a datum of reality, and the unity of human beings in identical sentiments, ideas, purposes or habits, as something not a datum, not real, the mere creation of our comparing intelligence. A striking example of such a point of view on Ethical ground is the passage in *Methods of Ethics*, p. 374, where Prof. Sidgwick speaks of testing the feeling of common sense towards the sum of pleasure as an ethical end, by supposing that there was only a single sentient conscious being in the universe.

Of course it is allowable to suppose, for the sake of argument, alteration in a state of things which we know to be actual; but nobody—least of all so cautious a writer as Prof. Sidgwick—would remove in his supposition so enormous an element of the case as man's social life, unless he supposed it to belong less really to the individual's moral identity than his existence as a living body does. This is simply not the fact. Of course, if a plague carried off all men in the world but one, that one might *retain* his social consciousness and habit of mind. But apart from further religious assumptions, that consciousness would be an illusion, and the man's self would be a mutilated fragment for which no real life was possible. The fairer case to put, which we can observe in fact but too often, is to suppose that the body lives on, but that the real identity with society and humanity—the universal consciousness—is extinguished in that one body by disease. Then we see that it was not in the least a metaphor but an absolutely literal truth to say that the man's real self—what he was as a moral being and in part as a legal person—consisted in a system of universals, or identities including difference—*viz.*, the consciousness of certain relations which, as identities in difference, united him with family, friends and fellow-citizens. Identities in difference, such, *e.g.*, as a man's relation to his son; it is like the case of the two outlines which I mentioned. The two men are bound together by certain facts known to both of them, certain sentiments and purposes, all of which they both share, but in regard to which each of them has a different position from the other, apart from which difference the whole identity would shrink into nothing.

In Political Philosophy, again, we may notice Mr. Spencer's social atomism, curiously doubled with a comparison of the body politic to the living body, in which the state is taken, roughly speaking, as a unit among units, instead of being taken as a real identity throughout the whole. It is a strange fate for Plato's famous simile of the organism to have its contention retorted in this way. A justification might be found for Mr. Spencer by pressing home the idea of a spiritual identity as against an external or legal one, and probably that is the sort of meaning which he has in mind, but he is barred from saying so by disbelieving in identity altogether; and it would not be true, for a spiritual identity will always express itself as a legal one.

I should like to try and illustrate this point of real identity by one further example. We here, the members of the Aristotelian Society, have in our minds, *quâ* members, a

really identical purpose and endeavour, and consciousness of certain facts, just as actually and truly as we are actually and truly sitting round an identical table. It is not the fact that we are a number of separate individuals or atoms, each completely real in his sensuous identity, and merely cherishing, in addition, certain ideas which happen to resemble each other. In as far as this is fact, it is so in the sense that our moral being has enough in other relations to fill it up and make it real, apart from what we are and do as members of this Society. But in as far as our membership plays any part in our consciousness, so far this real identity actually and in sober earnest forms a part of our being as the individuals that we are, and our solidarity as a Society is only another aspect of a real identity which is recognised in a different form by each several member of the Society, according to his individual relations to it. It may be said: "But our ideas and purposes in respect of the Society are not all the same; they are probably not all even in agreement". But our ideas of the table are not all the same; our perceptions of it are certainly all different—the different angles at which we see it answer for that. No one can prove that we all see it of the same colour, and if we do not, our perceptions of it are even discrepant. Yet we say it is the same table, because, in our worlds which we severally construct and maintain, it fills a corresponding place, and so we do not say that there are as many tables as people; but we call it one and the same table which we all perceive. And so, because this Society to which we belong is recognised by each of us in certain purposes which are relative to the corresponding purposes of others, and which assign different people the places necessary to common action, we call it the same Society, which really exists in the ideal and practical recognition of it by its members, and is something in them which is the same in all of them, and without which they would be so far devoid of a real solidarity which they now possess.

If we once begin trying to exclude difference from identity, we can never stop. The comparison of Locke's discussion with Hume's is interesting in this respect. Hume follows much the same lines as Locke, but bears more distinctly in mind that in explaining an identity which includes difference—*e.g.*, personal identity—he is not expounding a fact, but is, according to his own principle, accounting for a fallacy. The problem is, of course, as old as Heraclitus. If we want to free identity from differences, we must go to atomic sensation, and then we cannot. Any limit which we place upon

real identity has only a relative value, depending upon the aspect in which the terms are compared. If we try to make such a limit absolute, it at once becomes arbitrary.

And by accepting such a limit we may be driven into an opposite extreme, through lumping together all that lies beyond our limit. It seems to me that the Comtists do this in erecting Humanity as an object of worship; they know that all ideas of solidarity or real identity among men are apt to be taken as fiction, and they think it as cheap to have a big fiction as a small one. So they take an object, I think, in which it is really very hard to show a centre of identity. You can do something with an ideal human nature embodied in an individual, or with a national consciousness and history; but is there really anything at once definite and valuable that links together all humanity as such, including the past?

It often occurs to one to ask oneself, whether all this question is not largely verbal. Supposing we take identity to exclude difference, and therefore practically banish identity from the world altogether, and instead of it use the term similarity or resemblance, and attach certain consequences to certain degrees and kinds of similarity, would philosophy suffer any loss? When Hume explains continued identity as a current fiction, does he not explain it quite as well as anyone could who called it a fact? When Mill treats consciousness as an ultimate inexplicability, does he not in that very passage state the nature of consciousness as well as anyone could who professed to be able to explain it? There is something in this in so far as we analyse contents, as Locke and Hume do in their discussions, and distinguish what consequences attach to what resemblances, or, as Hume would call them under protest, identities.

This can be done, by the process of defining and precisely limiting the points of resemblance in respect of which inferences are drawn, such as those inferences which we draw from what we call personal identity. An indiscernible resemblance, between two different contents, in specified respects, will do whatever identity will do, because it is identity under another name. The self-contained identity of the separate contents is broken down when you admit that one of them can be indiscernibly like the other and yet also remain different from it. In that case the contents form a coherent system or unity in multiplicity, which is the essence of identity.

The only objection to this is the confusion of terminology, and so of thought, which is involved in putting ordinary

similarity, the essence of which is not to be precisely analysed and not to establish a middle term or centre, on the same level as "exact likeness," which establishes a middle term or centre of unity. We know that in ordinary similarity the things pronounced similar remain separate, and you cannot infer from one to the other. On the other hand, in indiscernible likeness or identity there is a systematic unity between the elements in question which is as real as the elements themselves. Therefore, to dispense with concrete identity involves a confusion of the case in which the transition or unity is "objective"—*i.e.*, as real as the content itself—with the case in which the content is self-contained and merely has a certain echo of another content, so that the similarity of the two may be called subjective; that is to say, that it is not precisely referred to any element in the content itself. In the one case the unity of the contents is real, in the sense that it is definitely a part of themselves; in the other case it is a fiction, in the sense of being somehow added on to them by a confused perception.

It is quite possible to examine into the bearings and nature of a fiction or artificial structure, and English philosophy, from Hobbes to Mill, has done much good work in this attitude. But putting aside the theoretical inconvenience, which I have tried to point out in detail, of assuming the wrong kind of unit, there is also an important practical effect on the theoretical interest. People will not pay the same attention to what they think secondary or artificial as to what they think a reality in its own right. Reality means to us something that resists efforts to destroy it and refuses to be remodelled at our pleasure, and everything which is artificial or made up, though of course it exists, seems arbitrary and capable of being remade in another way, especially if we believe that the units when separated would retain a value which, in fact, they only have in synthesis. And for that reason anything artificial seems less fundamental, and less worth detailed investigation, than what is thought to have a nature that cannot be got rid of, and that includes all we need care about.

I should like, in conclusion, to illustrate this effect by more general considerations. The effect is, I repeat, the outcome or embodiment of an idea that difference is detrimental to identity (not that the logical formulation of the doctrine is responsible for the whole effect or embodiment); and it consists in a sceptical attitude towards the real unity of every system or synthesis which can be seen to be a synthesis. And by "real" I mean having equal reality

with the individuals which enter into the synthesis, so as to form an integral part of their nature, and not to rank as something which may be thus or otherwise without fundamentally affecting those individuals.

This feature is extremely remarkable in the otherwise brilliant history of British philosophy. I suppose that in the theory of material evolution England stands unrivalled. In the theory of spiritual evolution, apart from some excellent recent treatises on the simpler phases of anthropology, and apart from the recent Germanised movement itself, England has not a single work of the first class, and hardly a single work of the second class, to show. Of course Herbert Spencer fills a large place in the world's eye, and has no doubt made important general contributions to the theory of evolution. But I think it would almost be admitted that he is more of a theorist than of an inquirer, and at best his inquiries are very limited in range. On the evolution of fine art we have not merely no philosophy, but we have not the material for it; we have no native *history* of fine art of any distinction. The history of religion, of morals, of law, of philosophy, and also history as such, have met with no complete philosophical treatment. I believe there is no tolerably good edition of Plato's *Republic*, or of Aristotle's *Ethics* or *Politics* (till the last few days), that has been made by an Englishman for the use of Englishmen. The same is true of the New Testament, though there I am told that other nations share our deficiency; but they do not share the deficiencies of our general treatment of theological subjects, which till lately testified to the same curious apathy on the part of philosophical students.

Our logic even has only of late—I should say not till Mill's *Logic* appeared—really attempted to assume a vital and organic character as a genuine analysis of the intellectual world. Our analytic psychology and metaphysic, while it has from time to time shaken the world by the acuteness of its questions, has, as it always seems to me, almost wilfully declined to engage in the laborious task of answering them.

Such observations as these may be taken as an attack on English philosophy. I do not mean them to be so; I do not doubt that English philosophy will creditably stand comparison with that of any nation in the world, excepting always, in my judgment, the ancient Greeks. But I do think that not enough attention is usually paid to what is, so far as I know, the wholly unparalleled fact, which a mere glance at a bookshelf containing the works of the great

British philosophers will convince us of, that they have understood the limits of their subject quite differently from the philosophers of other countries. The qualities which have hitherto been displayed in British philosophy—I mean in the really effectual part of it—have been, as it seems to me, only a portion of the characteristics of the English race. Penetration and audacity, a power (so to speak) of leading the forlorn hope, have been the characters by which British philosophy has at times left a decisive mark on the thought of the world; but it has hardly shown the power of comprehensive organisation and continuous growth which in practical life, and I suppose in physical science, put the English race at the head of the nations. We do hear sometimes that even in practical organisation, when it has grown so elaborate as to demand conscious and reflective development, we tend to come short; *e.g.*, in education and in the means of modern war.

This national peculiarity, which can hardly as a matter of fact be denied, is no doubt a defect of our good qualities; and it is perhaps not fanciful to connect it with our insular position, which may cut us off more than we are aware from the impression of a real unity and continuity in a very various life. No one can read Goethe's recollections of his boyhood without feeling how, for example, the pageants of the empire which he witnessed at Frankfort helped to call out his pregnant sense of organic continuity. More especially I suppose that the secondary results of the Renaissance which led up to the splendid development of genius in Germany about 100 years ago were choked in England largely by the political causes which led to the victory of Puritanism.

It seems to me, therefore, that the recent interest in German philosophy, which has shown itself in some meritorious and perhaps in some rather laughable forms, is not an accident, but is an aspect, however humble, in the great intellectual movement of the nineteenth century, and brings with it, however awkwardly, an element in which English abstract thought has hitherto been deficient; that is, a faith in those higher forms of human solidarity which are only created, maintained and recognised by intelligent effort. We must remember that while Kant and Hegel are annoying our philosophers, Rousseau, Schiller and Goethe, who have the same ideas in their practical shape, are at the other extreme of society, under the name of Froebel, reforming our infant and elementary schools, and that perhaps our very economical and commercial existence is at stake in the degree to which the national mind can be awakened to the real value of the

world of truth and beauty. The actual history of the Germanising movement in England would be well worth tracing. I suppose Coleridge and Carlyle represent two early aspects in it; Carlyle's laborious historical work is quite as characteristic of it as Coleridge's rather ineffective philosophising.

The logical aspect of such a movement as this is the transition from an idea of exclusive or abstract identity to one of pregnant or concrete identity. I should say the transition began in England between Hamilton and Mill. This idea has not been overwhelmed by the reaction which has set-in in Germany against Hegelianism, but remains a permanent and vital gain to logic. A nation does not lose what a teacher like Goethe, not to speak of Hegel, has taught it; and we should be much mistaken if we fancied that our common logic was already on a level with that of Prantl and Sigwart, because it is innocent of Hegelianism, against which they are in reaction. The reaction is simply a way of thoroughly appropriating what has been done and making sure that we understand it. The state of innocence is something very different and inferior.

IV.—REALITY AND THOUGHT.

By F. H. Bradley.

In the few pages which follow I have of course made no attempt to deal fully with this subject. My object is mainly to remove a certain misapprehension. I am not going to try to show what Reality is, but only what we may take it to be without contradicting ourselves in a particular way. There is an erroneous idea that, if Reality is more than thought, then thought is at least quite unable to say so. To assert the existence of anything in any sense beyond thought suggests to some minds the doctrine of the Thing-in-itself. And of the Thing-in-itself it is rightly contended that, if it existed, we could not know of it, and that, so far as we know of it, it does not exist. The attempt to know this Other would, in succeeding, be suicide, and in suicide could not reach anything beyond total failure. Now I fully accept this result, but I wish to keep it within rational limits. To think of anything which can exist quite outside of thought I agree is impossible. But I dissent wholly from the corollary that nothing more than thought exists. If thought is an element in a whole, then I cannot see that it follows that the remainder of this whole exists apart and independent, and must be taken to be a Thing-in-itself. And I will try to show that there is no impossibility in thought's existing as an element, and no self-contradiction in its judgment that it is less than the Universe.

If we take Reality, as we commonly conceive it, we find it possesses two aspects—existence and character. It has a "what" and a "that". Now I shall assume that these aspects do not exist independently, but are mere distinctions which we make within an indivisible Reality. If we try to get the "that" by itself, we do not get it; either we have it qualified or we fail utterly. If we try to get the "what" by itself, we find at once that it is not all; it points to something beyond, and it can not exist merely as a bare adjective. Neither of these aspects, if you isolate it, can be taken as real or is itself any longer; for they are not divisible, but only distinguishable. This I am going to assume, and I now will proceed to point out that thought works within this distinction. Thought, in its actual processes and results, is quite unable to transcend the dualism of existence and character,

the "that" and the "what". I do not mean that in no sense whatever is thought beyond this dualism. I do not mean that thought is wholly satisfied with it, and has no desire for something higher. What I mean is that, taking judgment to be completed thought, you will never find a judgment in which the subject and predicate are the same. You will never find a judgment in which the genuine subject is not reality, which goes beyond the predicate and of which the predicate is an adjective. And the first conclusion that I have to urge is that, in desiring to transcend this distinction, thought is wishing to commit suicide.

If we take any judgment we find the distinction of reality and idea. Fact and truth are not the same. Truth and thought are not the thing, but are of it and about it. Thought predicates an ideal content of a subject. The idea is not the same as fact, for in it existence and meaning are necessarily divorced. And the subject is neither the mere "what" of the predicate, nor any other mere "what". Nor, if it is proposed to take up a whole with both its aspects, and to predicate the ideal character of its own subject, will that proposal lead us further. If there the subject is the same as the predicate, why trouble oneself to judge? If it is not the same, then what is it? And you are fast in the dilemma. There is no judgment at all, there is a pretence of thinking without thought; *or* there is a judgment, but the subject is more than the predicate. It is a "that" beyond the mere "what".

But it will be objected that the subject is never mere bare reality, bare existence without character. But I never fancied that it was so. No doubt the reality which is the subject has far more unspecified content than is stated in the predicate. No doubt a judgment is the differentiation of a complex whole. It is analysis and synthesis in one. It separates an element from, and restores it to, the concrete basis, which is of necessity richer than the mere element by itself. All this, in my opinion, is most true and is the only true doctrine. But then it is perfectly irrelevant. The question is whether, in any judgment which really says anything, there is not an aspect of existence in the subject which is not found in the predicate. And, for myself, I am convinced that this is so with all judgments. And if it is urged upon me further that the subject itself, being in thought, can therefore not fall beyond, I must ask for rather more accuracy. "Partly beyond" appears compatible with "partly within". And, leaving prepositions to themselves, I must recall the real issue. I do not deny that reality *is*

an object of thought; what I deny is that it is *merely* so. If you wish here to distinguish between thought and its object, that opens a further question to which I shall return. But if you admit that, in asserting reality to fall within thought, you meant that in reality there is nothing beyond what is made thought's object, then your objection comes to nothing. Reflect upon any judgment as long as you please, operate upon the subject of it to any extent which you desire, but then (when you have finished) make an actual judgment, and see if you do not find, beyond the content of your thought, a subject of which it is true, and which it does not comprehend. You will find that the object of thought in the end must be ideal, and that you cannot get its own existence inside any idea. The "that" of the actual subject will for ever give you a something which is not a mere idea, which is different from any truth, and which makes such a difference to your thinking that without it you have not even thought completely.

"Ah, but," you may reply, "the thought you speak of is thought that is not perfect. Where thought is perfect there is no discrepancy between subject and predicate. An harmonious system of content predicating itself, a subject self-conscious in this system of content—this is what thought should mean. And in this the division of existence and character is quite healed up. Even if this is not actual, it is possible, and the possibility is enough." It is not even possible, I must persist, for it really seems unmeaning. And I urge again the dilemma—If there is no judgment, there is no thought; if there is no difference, there is no judgment, nor any self-consciousness. But if there is a difference, then the subject is still beyond the predicated content.

But a mere denial is unsatisfactory. Let us suppose that the dualism in thought has been transcended. Let us assume that existence is no longer different from truth, and let us see where this takes us. It takes us straight to thought's suicide. A system of content is going to swallow up our reality, but in our reality we have at present the fact of sensible experience, immediate presentation with its colouring of pleasure and pain. We have mere sensation, mere feeling, the fact to be named at your discretion. Now, I presume there is no question of conjuring this away; and how it is to be exhibited as an element in a system of thought-content is a problem never solved. Thought is relational and discursive; if it ceases to be this, it commits suicide, and if it remains thus, how is immediate presentation to come out of it? Let us suppose the impossible accomplished, let us imagine an harmonious

system of ideal contents united by relations, and reflecting itself in self-conscious harmony. This is reality, all reality, there is nothing outside it. The delights and pains of the flesh, the agonies and raptures of the soul, these are fragmentary meteors from thought's harmonious heavenly system. Perhaps; but the doubt which returns upon one is, if these burning experiences can be in any sense mere pieces of thought's heaven. If not, and if really they have fallen out, then the heaven which they have left was not like our earth, and it is their fall which has caused our fiery confusion. And if the fall is *our* error, then our nature must somehow not be all heavenly. But if, on the other hand, our experiences are fair samples of thought's world, then this world is very different from the description we had of it. Without a metaphor, feeling either belongs to perfect thought or it does not. If it does not, there is at once a side of existence beyond thought. But if it does, then thought is different from thought discursive and relational. To make it include immediate experience, its character must be transformed. It must cease barely to predicate. It must get beyond mere relations. It must reach something other than truth. It must, in a word, have been absorbed into a higher intuition. Now, such an experience may be called thought, if you choose to use the word; but, if anyone prefers the term feeling or will, he has as much justification. It would be a whole state which both includes and goes quite beyond each element, and to speak of it as simply one of them would be playing with phrases. For (I must repeat it), so far as thought ceases to be merely relational, it ceases to be mere thinking. Any basis, from which the relation is thrown out and into which it returns, must be something not exhausted by that relation. It will be an existence that is not truth. And in reaching a whole which can contain every aspect within it, thought must absorb what divides it from feeling and will. But when these all have come together, then, since none of them can perish, they must be merged in a Whole in which they are harmonious, and that Whole assuredly is not *one* of them. The question is *not* whether the Universe is in any sense intelligible. The question is whether, if you thought it and understood it, there would be no difference whatever between your thought and the thing; and again, supposing that to have happened, whether thought must not have changed its nature.

Let us try to realise more distinctly what this consummation would involve. If both truth and fact are to be there, then nothing must be lost. We must possess in the Absolute

every item of experience. But while we cannot have less, we may have a great deal more, and this more may so supplement the elements which we have, that in the whole they are transformed. Now, to get such a mode of apprehension as is identical with reality, is it not clear that predicate and subject, and subject and object, and, in short, the whole relational form, must be merged? Why should the Absolute want to make eyes at itself in a mirror, or, like a squirrel in a cage, to go the round of its perfections? Is it not clear that such processes must be dissolved in something, not poorer, but a great deal richer than they are? And must not feeling and will also be merged in this whole, into which thought has entered? Now, if we may suppose such a whole state, a much higher form of the immediacy which we have (more or less) in feeling, then in this all divisions are healed up. It would be experience entire, containing everything in harmony. Thought would be present in a higher intuition, will would be there where the ideal had become reality, and feeling would live on in this total fulfilment. Every flame of passion, chaste or carnal, would still burn in the Absolute unquenched and unabridged, a note absorbed in the harmony of its higher bliss. Now, I am not stating that we can imagine how in detail this can be. I am not asserting that in this form the Absolute actually is real. I will not here say that, even as a supposition, such a reality is defensible—though I at least know of no way in which the opposite can be shown, as it can be in the case of every other assertion, or denial, or declared abstention from judgment about the Absolute. What I am urging is this, that if truth and fact are to be one, then in some such way as this thought must reach its consummation. But in that consummation thought must certainly so be transmuted, that to go on calling it mere thought would be wholly preposterous.

I have so far tried to show, first, that, in the ordinary sense of thought, thought and fact are not the same, and, in the second place, that, if their claim to be the same is worked out, then thought ends in a reality which swallows up its character as thinking. I will now consider whether thought's advocates are likely to find any barrier to their client's happy suicide. I can think of nothing which is sufficient.

It might be urged that our consummation is the Thing-in-itself, and that hence it makes thought know what is essentially not knowable. But the objection forgets that our Whole is nothing but an experience and a mode of apprehension, and that, even when we understand by

"thought" its common discursive form, the reality is not said to exist apart from this. Emphatically not so, for the Absolute cannot exist apart from any single one of its elements. But the nature of the Thing-in-itself is surely to exist apart.

Let us pass to another objection. We may be told that the End, because it is that which thought aims at, is therefore itself (only) thought. This is first to suppose it impossible for thought to desire a consummation in which it is lost. But why should not the river run into the sea, and the self lose itself in love? And further, on behalf of will the same claim might be made, and no less on behalf of desire for sensation, pleasure and beauty. Where all reach their end in the Absolute, that end belongs to none severally. And we may instance in particular such a case as morality. That essentially must desire an end which is not (merely) moral because it is super-moral. Nay, even personality itself, our whole individual life and striving, tends to something beyond personality. Of course the Absolute has personality, and morality and immorality; but it has fortunately also so much more, that to call it personal would be as absurd as to ask if it is good or wicked.

But I may be told that in self-consciousness we actually experience a state of mind where truth and being are identical, and that here at all events thinking is not different from reality. This is an entire delusion. There is no self-consciousness in which the object is the same as the subject, none in which what is perceived exhausts the whole self. In self-consciousness a part or element, or again a general aspect or character, becomes distinct from the whole mass, and stands over against the felt background. But this background is never exhausted by the object of consciousness—and it never could be so. Anyone, who will make the experiment, should be able to convince himself with ease that in self-consciousness what he feels cannot wholly come before him. It can be exhausted, if at all, only by a long series of observations, and the summed result of these observations cannot be experienced as a fact. It is a truth which cannot ever be verified as quite true at any particular given moment. In short, consciousness implies discrimination of an element from the felt mass, and a consciousness that should discriminate every element at once is psychologically impossible. And this impossibility, if it became actual, would still leave us in the dilemma—Either no difference, and therefore no distinction and no consciousness, or a distinction, and therefore a difference between object and reality. But surely, if

self-consciousness is appealed to, it is evident at once that at any moment I am more than the self which I can think of. Everything in feeling may be intelligible—I at least do not question that—but it cannot be understood so that its truth and its existence become the same; and, if it could be, such a process would certainly not be thinking.

In thinking the subject is much more than thought. And that is why we are able to imagine that in thinking we find all reality. But in the same way the whole reality can as easily be found in feeling or in volition. Each is one element in the whole, or the whole in one of its aspects; and, in getting an aspect or element, you must get the whole with it. But to argue, because, when we find this one aspect (whichever it suits us to take), we find the whole Universe, therefore there is nothing in the Universe beyond this one single aspect—is not this simple confusion?

But the reader perhaps will agree that no one really can believe that mere thought includes everything. The difficulty lies, he may urge, in *maintaining* the opposite. Since in philosophy we must think, how is it possible to transcend thought without a self-contradiction? For theory can reflect on, and pronounce about, all things, and in reflecting on them it includes them. So that to maintain in thought an Other is by the very same act to destroy its otherness, and to persist is to contradict oneself. And we may be told that, admitting thought's impotence to satisfy us as to reality's falling wholly within its limits, nevertheless we, so long as we think, must not venture to say this. And the question is therefore whether philosophy does not end in sheer scepticism—in the necessity, that is, of asserting a proposition which it is at the same time no less provoked to deny. I have myself been too much troubled by this difficulty to treat it otherwise than as serious, and in what follows I will try to exhibit the solution.

We maintain an Other than mere thought. Now in what sense do we hold this? Thought being a judgment, we say that the predicate is never the same as the subject—for the subject is reality presented as "this" (I do not say as *mere* "this"). You can certainly abstract from presentation its character of thisness, its confused relatedness, and also you can abstract the feature of presentation. Of these you can make ideas, for there is nothing you cannot think of. But you find that these ideas are not the same as the subject of which you are compelled to predicate them. You can think of the subject, but you cannot get rid of it, or substitute mere thought-content for it. In other words, in practice

thought is always found with an Other, and appears to demand it.

Now, the question is whether this leads to self-contradiction. Certainly, if thought asserted the existence of any content which was not an (actual or possible) object of thought, that assertion in my judgment would contradict itself. But the Other which I maintain is not any such content. It is not another "what" at all. Not for one moment do I suggest that the Other lies outside intelligence. Everything, all will and feeling, is an object for thought, and must in its essence be intelligible. That is certain; but, if so, what becomes of the Other? If we fall back upon the mere "that," then thatness is itself a distinction made by thought, and we have to face this difficulty. If the Other exists it must be something, and if it is nothing it does not exist.

Let us take an actual judgment and examine the subject with a view to find our Other. In this we at once encounter a difficulty. We have always in practice more content in the subject than we have in the predicate, and it is hard to realise what, besides this overplus of content, the subject possesses. However, we can find in it two characters—infinitude in the sense of its going always beyond itself, and, in the second place, immediacy. The presented subject in the judgment has not only more detail than the predicate, but its detail is unlimited. Of course, by this I do not mean that the actual plurality of its features goes beyond any finite number. I mean that its detail is relative to something outside itself. In its content it has relations which do not terminate within that content, and its existence therefore is not exhausted by itself, as we ever can have it. If I may use the metaphor, it has edges which are ragged in such a way as to imply another existence from which it has been torn, and without which it really does not exist. The content of the subject strives, we may say, towards an all-inclusive whole. That is one character, and the second is the character of immediacy. By this I mean that in the real subject the "what" and the "that" are not divorced. It is given with its content in one integral whole. The "what" is not taken from the "that" and turned from fact into truth, and predicated as the adjective of another "that," or even of its own. This is what I mean by immediacy; and though this character is plainly not consistent with endlessness, yet the subject seems to have both these features, while the predicate clearly should not have them.

Now, if we take the subject to have these two characters

which are absent from the predicate, and if we take the desire of thought to imply removal of what makes predicate and subject differ, we begin to see more clearly the nature of the Other. And we may perceive at once what is required in order to extinguish its otherness. In the first place, the thought-content must be consistent with immediacy, and in the second place, the subject must be made consistent with itself. It must become a self-subsistent, and that means an all-inclusive, individual. But as it passes into the judgment (and it must pass into the judgment), it becomes infected with the relational form. The self-dependence and immediacy, to which it lays claim, are not possessed by its content. Hence, in the attempted self-assertion this content forces the subject beyond actual limits, and begets a process which is infinite and cannot be exhausted. And thus, for two reasons, thought's attempt wholly to absorb the subject is unsuccessful. In the first place, thought cannot exhaust the content; and if *per impossibile* that were done, this exhausted content could not bear the character of immediacy.

Let us take the subject that is presented. It is an undivided whole that, as we think it, passes into a confused congeries of qualities and relations. Thought desires to transform this congeries into a system. Now, to understand the subject, we have at once to pass outside it in time, and again also in space. But these outside relations do not end, and from their own nature they cannot end. Exhaustion is not merely impracticable; it is essentially impossible. This is enough, but this is not all. Inside the qualities, which we took first as solid end-points of the relations, an infinite process breaks out. To understand, we are forced to distinguish without end, for we never get to that which is apart from further distinction. Again, to put the difficulty otherwise, we can neither anywhere take the terms and their relations as a whole, that stands by itself and calls for no further account; nor, on the other side, when we distinguish, can we avoid the endless process of searching for the relation between the relation and its terms.[1]

Thus thought cannot get the content into an harmonious system. And in the next place, even if it did so, that system would not *be* the subject. It would either be a maze of relations, a maze with a plan of which for ever we made the circuit, or it would lose altogether the relational form. In the

[1] I am sorry that my space does not allow me to work out the foregoing. Probably the reader will go with it sufficiently to be able to affirm the general conclusion. There are some further remarks below.

first place, our (impossible) process would assuredly have truth distinguished from its reality. It could avoid this only by coming to us bodily all at once, and, further, by suppressing entirely any distinction between subject and predicate. But if in this way it became immediate, it would obviously lose its character. It would no longer be a system of relations. It would have become an intuition. The Other would in this case have been certainly absorbed, but unfortunately thought would itself have no less been swallowed up and resolved into an Other.

Thought's relational content can never be the same as the subject, either as it appears or as it truly is. The reality that is presented is taken up in a form not adequate to its nature, and beyond which its nature must appear as an Other. But, to come at last in full view of the solution of our problem, this nature is the nature thought wants for itself, which even as mere thinking it desires to have, and which, further, in all its aspects exists already within thought in an incomplete form. And what it all comes to is this. The end, which would satisfy mere truth-seeking, would do so just because it had the features possessed by true reality. It would have to be an immediate, self-dependent, all-inclusive individual. But, in reaching this perfection, thought would lose its own character in the act of reaching it. For thought does desire such individuality; that is precisely what it aims at, an individuality which cannot be gained while we are confined to relations.

Still, we may be told that we are far from the solution of our problem. The fact of thought's desiring a foreign perfection is precisely the old difficulty. If thought desires this, then it is no Other, for we desire only what we know. The object of thought's desire cannot be a foreign object, for what is an object is *not* foreign. Doubtless, but we have now got below the surface of this dilemma. Thought desires for its content the characters which make reality. These characters, if it realised them, would destroy itself as mere thought. Hence they are an Other beyond thought. But, on the other hand, thought can desire them because its content has them already in an incomplete form. And in desire for the completion of what one has there is no contradiction. Here is the solution of our puzzle.

The relational form is the compromise that has this solution in view. It is an attempt to unite differences which have broken out of the felt whole.[1] Differences forced

[1] Cp. MIND xii. 378.

together by an underlying identity, and a compromise between the plurality and the unity—this is the essence of relation. The differences remain independent, for they cannot be made to resolve themselves into their own relations. And, if they did, either they would perish, and their relation would perish with them, or else their outstanding plurality would still remain unreconciled with their unity in the relation, and so would beget the infinite process. And the relation does not exist beyond the terms; for, if so, itself would be a new term which would aggravate the distraction. But, again, it cannot lose itself within the terms; for, if so, where is their common unity and their relation? They would in this case simply fall apart. And thus the whole relational perception has various characters. It has the character of immediacy and self-dependence, for the terms are given to it and not constituted by it. It has the character of plurality. It has (as representing the primitive felt whole) once more the character of an unity comprehending plurality—an unity, as before, not constituted by the differences, but added from without. And, contrary to its wish, it has further a restless infinitude, for such infinitude is the very result of its practical compromise. And what thought desires is, while retaining these features, to obtain them all in harmony, to have a whole which will not conflict with its elements, and elements that of their own nature live within a whole. And so the idea of unity is not foreign, nor is plurality foreign, nor is unity reconciled with plurality foreign. There is nothing foreign that thought wants in desiring to be a whole, comprehending everything, but superior to discord. And yet, as we have seen, such a completion, such an end would emphatically make an end of mere thought. It would bring its content into a form which would *be* reality itself, and where mere truth would perish. The object of thought aims at possessing the whole character of which thought already has the separate features. These features thought cannot combine satisfactorily, though it has the idea and even the partial experience of their complete combination. And, if the object succeeded in its aim, it would *become* reality; but it would cease to be an object. It is this completion of thought beyond thought which remains for ever an Other. Thought can form the idea of an apprehension, something like feeling in directness, which contains all the features desired by its relational efforts. It can understand that, in order to attain to this goal, it must get beyond relations. Yet it can find in its nature no other way of progress.

Therefore, to reach its end, it perceives that this essential side of its nature must somehow be merged, so as to take in the other side. But such a fusion would force it to transcend its present self—how in vague generality it does apprehend; but how in detail it cannot understand—and it can see the reason why it cannot. This self-transcendence *is* an Other, but to assert it is *not* a self-contradiction.

Now, I am not saying here that such an Absolute, in which thought transcends itself, does really exist. That is, of course, not a question to be dealt with summarily. All that I am urging is, that if such an Absolute is supposed, thought can find its Other there without inconsistency. The whole reality will be merely the object thought out—but thought out in such a way that *mere* thinking is absorbed. This same reality will be feeling that is satisfied completely, for in its direct experience we get restored to us with interest every feature lost by the disruption of our primitive felt whole. We have the immediacy and the strength of simple apprehension, no longer forced by its own inconsistencies to pass into the fruitless process of the infinite. And volition, if willed out, *is* this Absolute also. It is the identity of idea and reality, not too poor but too rich for division of its elements. Feeling, thought and volition have each of them a defect which suggests something higher. In that higher all are one, not that anything is lost, but that, to gain itself, each blends with that which seemed opposed, and the product of their union is richer than them all. The one reality, we may say from our human point of view, was present in each in a form which does not satisfy. To work out its full nature, it has sunk itself into these differences. But in each it longs for that absolute self-fruition which is reached only when the self bursts its limits and blends with another self. And so the desire of each element for a perfection which implies its fusion with the others, is not self-contradictory. It is rather an effort to remove a state of inconsistency, to remain in which would indeed be a fixed self-contradiction.

Now, if I am told that such an Absolute is the Thing-in-itself, I must venture to doubt if my objector understands. How that Whole, which comprehends everything, can deserve such a title is at least past my conjecture. And to the objection: "But the differences are lost in this whole, and yet the differences *are*, and therefore after all the differences are left outside," I must reply by a counter-charge of thoughtless confusion. For the differences are not lost, the differences are all inside; the fact that *more* is there than the differences hardly proves that they are *not* there. If an

element is joined to another in a whole of experience, so that on the whole and for the whole their mere specialities no longer exist, does that prevent each from still retaining its own speciality in its own partial experience? "Yes, but these experiences then at all events will fall outside the whole." They surely need do nothing of the kind. The self-consciousness of the part, its consciousness of itself even in opposition to the whole—all fall within the one absorbing experience, which contains all self-consciousness harmonised, though as such transmuted and suppressed. I admit, or rather I urge, that we cannot possibly construe this experience to ourselves; we cannot in any way imagine how in detail it can be. But to say that it exists and unites certain general characters within one undivided living apprehension is, I think, within our power. Whether we have sufficient reason to maintain this, and can justify it against objections, is not the question here at issue. That we can say it without any inconsistency I am myself convinced. And here (if I have not failed) I have shown that at least, from the point of view of thinking, we may assert such an Other without self-contradiction. This justification for thought of a possible Other may help both to explain and to refute the doctrine of a Thing-in-itself.

V.—THE LESSON OF NEO-SCHOLASTICISM.

By Francis Winterton.

A few years back, the English philosophical world was not a little astonished at the reappearance of the old Scholastic philosophy, supposed to have been dead and buried long ago. The harshness of tone with which more than one critic reviewed F. Harper's *Metaphysics of the School* and other works recently issued showed sufficiently well that they considered 'resurrectionists' of his type as engaged in a most improper task. But while, in their point of view, Neo-Scholasticism is little better than a vampire, it is nothing less than a phœnix in the opinion of its upholders. It is *the* system, the only one, the sole reasonable explanation of the universe, and will soon again have the whole intelligent world under its influence.

According to the writer's belief, neither of these two opposite views is just. Scholasticism seems to him to contain much truth, and truth established by demonstration as clear as has yet been possible in the metaphysical field; but its method was such as to condemn it to complete and absolute immobility, after a few important steps forward. In its recent revival, it is thus rather to be compared to a paralytic invalid seized with a fit of convulsive energy. This idea will be developed at greater length, after a brief historical sketch of the new movement.[1]

At the beginning of the present century, Scholasticism had long been overthrown, and the place it had formerly held as the official philosophy of the Catholic Church was in consequence vacant. The Church would have had no objection to a dozen official philosophies, provided they did not come into conflict with any of the dogmas she taught; and although Scholasticism was always looked back to with regret by ecclesiastical authorities, few or no attempts were at first made to incline the minds of the faithful that way. There was much unwillingness amongst Catholics to return to so discredited a form of thought, and many endeavours were made to establish other and better

[1] I wish here to acknowledge my obligations to Rev. F. Morawski, S.J., from whose polemical and historical work, *Filozofia i jej zadanie*, many statements contained in the following sketch are taken.

systems. To this we owe the doctrine of Rosmini, expounded in English by Mr. T. Davidson and others; the Fideism and Traditionalism of Lamennais, de Bonald, de Maistre, Bonnet and F. Ventura; and the different systems of Ontologism and Catholic Transcendentalism, respectively upheld, the former by Ubaghs and Fabre (of Louvain University), by Gioberti, Hugonin and Gratry; the latter by Günther, Staudenmayer and Deutinger, in Germany.

Each and all of these modes of thought found deadly opponents in the Jesuits, who, from the first days of their renewed existence, had seen the importance of taking up and holding fast the position of defenders of the faith. Their hostility to Rosmini is well known; but Mr. Davidson seems to think that Rosmini agrees better than the Jesuits with the doctrines of St. Thomas. That they (or rather a few of the Italian Fathers) were well advised in denouncing the system of Rosmini as dangerous to Catholicism, is very doubtful: they certainly did not succeed in obtaining its condemnation. Whether they had the right to oppose it was a question for their own conscience; and, of course, it is very easy to suppose them prompted by unworthy motives. But as for the assertion that Rosmini represents St. Thomas, I think that any person acquainted with Scholastic terminology, who has read the philosophical parts of the *Summa Theologica*, or even only the second part of the *Summa contra Gentiles*, could hardly help smiling. Rosmini admits an innate idea of Being. According to St. Thomas, the origin of *all* our ideas is sensation *(intelligibile in potentia)* which, perceived *by* the intellect as active *(intellectus agens)* and received *in* the intellect as passive *(intellectus possibilis)*, is the source of the idea *(intelligibile in actu)*. This doctrine I should have thought every student of St. Thomas knew by heart.

Fideism and Traditionalism both exalted faith and depreciated natural reason. According to the former doctrine, we can know nothing with certitude, not even our own existence, except by supernatural faith. The infallible Pope, as representative of the unanimous human race, is the source of all knowledge. Abbé Lamennais, who invented this overstrained Catholic system, was attacked by the Jesuit F. Rosavin, condemned by his own infallible Pope, refused to submit, and died excommunicated. The different shades of Traditionalism, according to which God revealed all or some items of natural cognition to our first parents and to us subsequently, together with the use of speech—so that words are not only the signs but the primordial causes

of our ideas—were also condemned several times. Against these, too, the Jesuits were foremost in the fight. There is no instance (so far as I am aware) of any Jesuit of note having been drawn into one or other of these systems, which, by an exaggeration of supernaturalism, destroyed the inalienable rights of human reason. And yet they were snares into which any zealous Catholic, endowed with more imagination than prudence, was very likely to fall; for instance, the celebrated Lacordaire was in his youth a follower of Lamennais, and the future orator of Notre-Dame was caught in the trap which not one disciple of Loyola failed to avoid.

But as for Ontologism, it was otherwise. Many Jesuit Fathers, among whom FF. Rothenflue, Fournier and Martin are perhaps the best known, were struck with the fancy that our ideas originate in a vision of the soul, by which it perceives God and all things in Him. There were for a time considerable dissensions in the Society, but F. General Roothaan put the Ontologists down with a strong hand. He was even criticised as having overstepped the limits of his authority. Events, however, justified him completely in the Society's eyes, for the Ontologistic systems were subsequently condemned at Rome as "unsafe," and Ontologism is now so entirely exploded a system that even at Louvain University, its former headquarters, the ancient doctrine of St. Thomas is exclusively taught, and no Catholic philosopher cares for any system of innate ideas, unless indeed that of Rosmini, which still holds its ground, can be considered as such. The Transcendental movement in Germany, which aimed at bringing Hegelianism nearer to the Church, ended by dragging Catholicism towards Hegel, was severely forbidden, and failed miserably.

While the different philosophical theories brought forward to fill up the void left by Scholasticism were, thus, one after another examined and set aside by the Church, the thought of a return to the old system gained more and more ground every day. Father Aloysius Dmowski, S.J., born in Podolia in 1799, wrote, when professor in the Collegium Romanum, his remarkable work, *Institutiones Philosophicæ*, based on a purely Scholastic foundation, though it does not enter so much into the details of the system as later works, and is rather less orthodox upon secondary points. It ran through five editions in a short time, and was once the text-book in many Catholic seminaries and universities. Father Dmowski was the first founder of Neo-Scholasticism, for he was the

first to put into execution its plan of campaign, *viz.*, to break away from the traditions of the Old School as regards puerile and useless questions, and to accept frankly and without reserve every conclusion and discovery of modern science. Besides, his position, in what is perhaps the most famous Catholic seminary in the world, gave him much influence over the minds of the rising generation ; indeed, most of the later upholders of Neo-Scholasticism amongst the Jesuits were formed by him. Balmès, a man incomparably and deservedly better known in a different way, thought out and wrote his *Fundamental Philosophy* and other works at about the same time—*i.e.*, during the first half of this century. The Spanish philosopher produced a work which, little as it is known in England, may on many accounts be styled a masterpiece. Cool and impartial criticism of adverse theories is hardly the distinctive quality of Southern minds ; but we cannot without injustice refuse to acknowledge the depth of his thought, the simplicity of his plan and the brilliancy of his ornate style. Whether he went so far as Dmowski in the number of doctrines that united him with the School, it would be impossible to say before having read all his works ; but the book just mentioned, of which there is a very readable French translation, suffices to justify the title of Neo-Scholastic here applied to him.

Ever since the publication of these two works, the revival of which they were the first sign has been constantly on the increase. Called into being, as just seen, by the imperative wants of the Church and the failure of other systems to satisfy her demands, it as yet depends almost entirely upon the increasing ardour of the clergy for philosophical studies ; and the very forward steps it has taken of late may be attributed partly to the endeavours of Pius IX., and especially of Leo XIII., who have encouraged a gradual return to St. Thomas, and partly to the strenuous efforts of many religious congregations, amongst which the Dominicans and the Jesuits stand conspicuous.

The elementary treatises of Liberatore, Tongiorgi, Palmieri and Sanseverino are, or ought to be, familiar to every philosopher whom this movement interests ; for the peculiar standpoint of the modern Peripatetics is more clearly emphasised in these books than in other special treatises—for instance, those of Baron di Grazia, Cornoldi and Kleutgen.

To complete this sketch, it may be well to name, among the Italians, the Dominican Cardinal Zigliara, Talamo and Taparelli (the author of much esteemed works on Ethics);

in Spain, Gonzalès (Bishop of Malaga), Caminero, Cuidas Orti and Lara; in Germany, Stöckl, Clemens, Plassmann, Morgott, &c. English priests are in general too completely taken up with their strictly professional duties to have very much to do with speculative philosophy; yet the name of Father Harper (to say nothing of such a layman as the late Dr. Ward) is far from unknown to the readers of philosophical reviews, both in this country and elsewhere.

The principal *raison d'être* of the movement here described is that the doctrines of the School—at least its fundamental doctrines—did not merit the fate that befel them in the last century. And, in so far as the reproaches and accusations heaped upon them by their adversaries go, the answers of the Scholastics seem to be satisfactory. But when they proceed to state the causes which, according to them, brought about the downfall of Scholasticism, I believe that what they say is not sufficient to account for it. In that belief, I wish to point out a radical defect in the system which neither its defenders nor its antagonists have as yet remarked, at least to my knowledge, and which is also to be found in all later doctrines, brought forward from the time of Descartes to the present day.

The abuse of authority is one great reproach constantly laid at the Scholastics' doors. This reproach would be well founded, if it could be proved that every, or even any, case of abuse proceeded from a fixed principle, and not from a defect which—either itself or its contrary—is more or less inherent in every human mind. To quote the practice of Scholastics is to quote nothing at all; for they can defy their enemies to cite a single passage of any one of their authors in which authority is erected into a principle. It is absurd to wilfully ignore and despise conclusions which the most famous thinkers have come to before us, because we then set up as an axiom that we are necessarily more intelligent than they: which remains to be proved. It is no less absurd to take for granted as true the inferences at which one great man, or several great men, have arrived, because we then make our intelligence of no account and stultify our own reasoning. Between these two extremes, every philosopher, every man of science, every historian, every literary critic, has to choose; and, according as he inclines more to one or to the other side, he will incur the charge either of rashness or of servility. This is therefore merely a question of practical sagacity, and not a theoretical principle. Now there is no doubt that many Scholastics erred by too much subservience; but it is within the limits of possibility that

thinkers of a later period have—some of them at least—gone too far the other way. 'He that is giddy thinks the world turns round;' and to accuse others of servility may, in certain cases, only be to confess one's own rashness. Authority, according to the Scholastics, had merely a *directive*, not a *decisive*, influence; which means that they took the opinions of one or more men of great philosophical genius to be true, but only provisionally, and until they saw that those opinions were false. Whenever there was a marked preponderance of opinions in favour of any particular theory, they thought it was better to admit that theory as the right one, *so long as no better one was to be found*. And it would be easy to show that this is just what is done at the present time by the mass of students and teachers in every branch of every science. Instead of letting every callow student of philosophy start a brand-new idea of his own, the Scholastics bent their energies towards finding, if possible, additional probabilities, if not a complete demonstration, of the theory that existed already.

As has been said, they certainly went too far in this respect; but this shortcoming was not systematic. The mediæval mind had something childish in its nature; and children are well known to lean too much to the side of authority. But Neo-Scholastics, with all their defects, are men living in our century, and hardly inclined to make themselves ridiculous by excessive subservience. Besides, with regard even to the Schoolmen, three things must be taken into account. First, the long duration of Scholasticism should excuse far more abuses of every kind. If we reckon the total number of Schoolmen to have been one thousand times more numerous than all the adherents of Kant taken together, we are not likely to err on the side of exaggeration. Now who would find fault with the Kantian system, because one of his disciples was too careful to follow his leader in all things? Nobody; and, if so, ought anybody to be scandalised if he finds a thousand blind followers of Aristotle among so many thousands of serious philosophers?

Secondly, it not unfrequently happens that in representative assemblies—often enough in the German Reichstag, as they say—members who are professors assume a dictatorial tone, but without consciousness of doing so and out of mere absence of mind. In like manner, the priests and monks, who were accustomed in their sermons to make use of authority as determining faith, were very liable to make what seemed the same use of it in their 'disputations,' as

determining reason. They themselves felt, however, that reason was not to be determined thus. In St. Thomas's *Summa Theologica*, whenever he decides a question one way or another, he always comes forward with a text: *Sed contra est, quod dixit (Sanctus Paulus, v.g.), &c.*, but he never stops at the text, and invariably proceeds to prove his theses by arguments founded on nothing but human reason. Indeed, the texts he adduces are often so very far-fetched, so obviously wrested from their literal sense, that we may well consider them simply as a motto, or a mere Scriptural way of pointing out the author's opinion.

Lastly, what can be—I do not say only to a Scholastic philosopher, but even to a Scholastic theologian—the real value of any authority short of a decree of the Church herself? Who does not know the time-honoured formula, *Admitto textum, et explico*, whenever any difficulty based upon authority is brought forward? Nay, even the decrees of the Church were treated in this manner very often indeed, and it was only when her firm determination to settle a question was quite evident, only when any endeavours to elude the sentence would certainly be met by a new and more precise decision, that such explanations, beforehand known to be useless, were not attempted. Thus the very habit of reasoning, and especially the subtle distinctions that were commonly made, were fatal to slavish submission. Aristotle says A is B, for instance, while I say that A is not B. But did he mean *exactly* what I mean? For if there can be conceived the slightest difference between his A and mine, my B and his, I can very easily, saying *Transeat* to the unuttered premiss that assumes the Stagirite's infallibility, and admitting his proposition to be verbally contradictory to mine, assert that it is not contradictory to it in signification. Here we see the abuse of reason—if reason can be abused—correct the abuse of authority.

But, it may be said, at least, this abuse is another excess which can neither be excused nor corrected. Subtlety and hyperacuteness were the bane of Scholasticism, and, by disgusting all serious minds, greatly contributed towards its overthrow. This, however, when we look at it with a closer scrutiny, is indeed a strange reproach to make. What can it signify? Does it mean that Scholastics are blamed for having been too clever, too keen-sighted, in philosophical matters? Such criticism would be worthy only of the prize-fighter who complained that his opponent hit too hard. They saw distinction where we see none: shall we on that

account say that there is no distinction where they saw one? A sailor at the mast-head cries out: Land! and yet is not laughed at by the passengers who perceive nothing. True, his eye *may* see an object that does not exist in reality; but the fact of the majority being against him is no proof of that. For my own part, having carefully studied many great questions which separate Scholastics from other philosophers, I have never failed to find, in the distinctions to which they resort, a possibility of reason, a glimmer of intellectual light. For aught I know, that possibility may have been for them an actuality, that glimmer a bright and shining beam: to laugh at them because they have seen what I do not see would only argue my own presumption; and the Irishman who, convicted by two witnesses that had seen him commit a murder, appealed to the millions that had not seen him, would hardly be more palpably absurd than I. 'Hair-splitting' is a consecrated term to decry what might with more justice be termed 'a tendency towards mathematical exactitude in reasoning'. Microscopical observers every day split objects much thinner than hairs; and whoever would find fault with them would only betray his own want of acquaintance with the scope of microscopical observation. We live in a century when one hundredth part of a second is taken account of, and one thousandth part of a grain is no insignificant weight. Does it not seem a most puerile subtlety to say that in falling to the ground a marble draws towards itself the whole terrestrial globe? and yet we know it to be true, on an extremely minute scale. The great and only principle which a philosopher should allow to guide him is: that every hypothesis should avoid (1) self-contradiction and (2) contradiction of facts. Now, self-contradiction is the simultaneous affirmation and negation of the same thing *taken in the same point of view*. If, therefore, a distinction comes between the hypothesis and the supposed self-contradiction or contradiction of facts which it contains; if by means of this distinction the same idea is each time taken in a slightly (be it ever so slightly) different sense,—all is saved. A miss is as good as a mile; and so long as contradiction is missed, even by only a hair's breadth, it is just the same for the system as if the objection raised were plainly of no value.

It is certain that every philosophical system must have its weak point: either self-contradiction or an insoluble mystery somewhere. But now-a-days philosophers merely refuse to answer objections on this point, very conveniently attributing their inability to reply to the known existence

of mystery. If it is pointed out that they flatly and formally contradict their own doctrines, they simply remark, 'It certainly seems so; and we must confess that this is the unanswerable difficulty which accompanies our view of Philosophy, as other difficulties accompany other views'. Mediæval Schoolmen had an unfortunate way of thinking that an answer ought to be given to every objection, and set to work accordingly. All they got for their excessive conscientiousness was to be treated as hyper-logical and over-subtle by men far more subtle than they and who knew better than to 'take the bull by the horns'. The Schoolman laboriously endeavoured to answer, one by one, every difficulty raised against the mysteries of Christianity. Compare him now with the disciple of J. S. Mill, who, driven by his principles to admit that a world is conceivable in which there may be an effect without a cause, frankly admits that there is here an insoluble difficulty, which he consequently does not even attempt to solve. Which of the two is the more acute in his way of proceeding?

A more serious accusation still is urged against the Scholastics. Those of old times made of Philosophy a mere handmaid of Theology—*theologiæ ancilla;* and everything goes to prove that their more recent imitators have the same intention. Theology set down then, as it still does, an allotted task, a list of dogmas to be defended; and these dogmas Philosophy had and has to defend as it best can. This was acting with a tendency, and such a tendency cannot fail to affect the character of Philosophy to its great detriment; for it warps the sincerity and good faith of the reasoner, always seeking after the foregone conclusion at which he wants to arrive. Such is the objection. To this a Schoolman might reply, and not without reason, as it seems to the writer: 'If a philosophy without a tendency were possible, it would perhaps be well; but such a desideratum is not to be found. If you say that, because we believe, we exert ourselves too much to prove our belief not absurd, can we not answer that those who do not believe will also exert themselves excessively to demonstrate the absurdity of our doctrines? And those who say they are indifferent—if there really exist any such—will also strive to prove that their standpoint is the true one. You cannot help it: every man must take up one of these three positions—conviction, indifference or unbelief; and since he thinks one of these three is the best, he will instinctively tend towards the favouring of every proposition that is itself favourable to his own point of view. And if you assert that indifference will

produce impartiality, you must prove that such indifference is reasonable, and a man already indifferent will not be impartial when he has to prove that. Besides, both Idealists and Realists start with the intention to admit certain facts as true, and build upon them as upon a necessary basis. Kant's famous question, How is Knowledge possible? which his whole system comes upon the field to answer, presupposes Knowledge as a fact that it tries to explain. Now, why should not those who believe in the truth of the Christian religion start from this truth as a fact which they have to take into account? Faith is a feeling of which one is conscious, just as one is conscious of existing; and if Descartes is allowed to take the latter feeling as a starting-point, why should we Scholastics be forbidden to take the former, not indeed as a starting-point, but as a standard to guide ourselves by? For if the comparison between us and Descartes or Kant is defective, the defect is in favour of Scholasticism; because they take respectively their own existence or the fact of knowledge as the basis of their systems, unproved and unprovable; while we attempt, as far as we can, to demonstrate by reason that of which we are already convinced by faith.'

But although it appears to the writer, recognising the general force of the pleas just stated, that the Scholastic method was, on the whole, more conducive to truth than any other subsequently devised, it does not follow (as already said at the beginning of this paper) that he agrees with its adherents in their view of the future that awaits it. The causes which they declare to have resulted in the fall of Scholasticism are numerous, and had an undeniable influence in favour of the great movement that at last dethroned that system of philosophy, without setting up any universally recognised successor in its place. Still, after having enumerated them all, we shall, I believe, find that they do not suffice, and shall have to look for a more deeply-seated defect.

Scholastics, in the first place, complain of bad faith and interested adversaries, both now and more especially in old times. But when, as in this case, an attack is directed with great passion against any set of doctrines, there always is, and must be, a certain amount of bad faith. The natural effect of passion is to blind the adversary to the value of your argument, and to give him an exaggerated idea of his own. And, whenever there is passion on one side, there is also passion on the other. The Scholastics were in a position to repel bad faith by bad faith, an interested attack

by a not disinterested defence. So this cause which they assign does not amount to much.

Next, it is urged by the apologists that the ardour for polite literature which, under the name of the Renaissance, did so much to civilise Europe, had an untoward effect on the study of philosophy. The old mediæval writers, it is allowed, had excessively neglected style; and style, in its turn, was revenged upon them to excess. The clouds of Plato were preferred to the *terre-à-terre* of Aristotle by men whose minds were more painfully affected by a clumsy phrase than by a fallacious argument. Students began to think that their three years' study of Barbara, Celarent and Baroco might well be shortened to make room for the art of harmonious numbers and terseness of expression. The great revolution came on; the adoration of form became the fashion of the day: how could Scholasticism hold up against the storm? All the wits were dead against it; and the old system could not recommend itself by a single treatise in readable Latin. So it was pitilessly laughed at and reviled from one end of Europe to the other by men like Luther, Erasmus and Pierre de la Ramée. But now that other systems have followed it, each more absurd and more ridiculous than the other, each bringing forward a more uncouth and barbarously technical terminology, each, in short, exaggerating the defects of the ancient School without possessing its qualities—now, at last, it is high time to stand forth again before the world, disgusted with these exhibitions, and show that Peripateticism on its technical side is at least not more barbarous than its modern successors.

Such is the language of the Neo-Scholastics, and it is not to be denied that something of what they say is true. Still, it does not account for the downfall of the system; for the fact is that Scholasticism, thanks partly to the literary talents of the Jesuits, weathered the storm, and was supreme everywhere, both in England and in France, when Descartes and Locke took the field. Now, neither Descartes nor Locke was such a very brilliant literary man. They wrote well indeed, but without any pretensions to more classical refinement than their adversaries. Other causes must be adduced to account for their triumph. Besides, is it credible that, at a given moment, the great majority of philosophical minds should have abandoned the Scholastic doctrine merely because of technicalities and difficulties, which are to be found in any science? Everybody is aware that Newton's *Principia* could not have been written

in Virgilian verse, or even in Ciceronian periods. The nature of the hypothetical medium called ether is certainly as puzzling as the most abstruse problem on which either Thomists or Scotists ever racked their brains. Yet did it ever occur to any reasonable man to throw aside mathematics, astronomy or physics on those accounts? No: a better reason for the overthrow of the Aristotelian empire must be given than the disgust of a few generations of supercilious Humanists.

But the new adherents of the School admit that there was, besides, a very grave and vital defect in the tactics of the old party. Copernicus, Galileo, Kepler and Newton had made an irreparable breach in the physical part of the system; and the professors, immovably attached to what they had learned, would not yield, even to truth evidently demonstrated, but persisted in linking the metaphysics and physics of Aristotle indissolubly together. Earth, as the *centrum mundi*, the solid crystalline heavens, the *primum mobile*,—all had to be admitted, or the Organon itself was disorganised, and the Ethics could no longer be upheld. In the face of the clearest certitude, they refused to give way one jot. They nailed their colours to the mast, and went down, beaten but not captive. Many excuses may be found for their conduct, especially the wonderful completeness of Aristotle's system, which they could not find in their hearts to destroy; but the results of their obstinacy were deplorable. Little by little, as more and more numerous adversaries arose against them, it became necessary to admit into the universities men who were not Aristotelians. The latter, at first in very small number, goaded to exasperation by the desperate and unreasoning resistance they met with on every point, became, of course, much fiercer and more dangerous anti-Peripatetics than they probably would have been. The learned world was too willing to take both them and their enemies at their word, and since 'All or nothing' was the cry, and the whole system could no longer be admitted, broke away from it completely. But now things are totally changed. Neo-Scholastics frankly admit every forward step in physical science, without exception; they only hold to Aristotle's Logic, Psychology and Metaphysics, as understood and expounded by the Angelic Doctor. On this field they take their stand, and are confident of ultimate victory. Here no discoveries will ever be able to turn the tide of battle against them. No microscope can be brought to bear upon the phenomena of consciousness. No galvanic battery, no chemical apparatus, will ever succeed in dissolving matter

and form into simpler constituents, or in proving that they are not distinct from each other. Therefore, having now circumscribed the old Aristotelian doctrine to those questions in which pure reason alone comes into play, they do not for an instant doubt of success.

This cause, set forth, as is seen, from a Neo-Scholastic point of view, had certainly some weight and a considerable influence on the events that took place during the 17th and the 18th centuries. But is it sufficient, even taken together with all the others, to account for the complete change of front then executed by all classes of the intelligent world? Bossuet and Fénélon were Cartesians; Malebranche, it is well known, was a priest of the Oratory. Notwithstanding the immense services rendered to the Catholic Church by Scholasticism, defections were at that time extremely numerous among the secular clergy. The religious orders were more or less kept back by their rule, and by their rule alone, from following in the wake of the movement. It was not only a defeat—it was a rout, a dispersion, a total annihilation; and there came a time when almost the only remains of the Scholastics were—their books, voluminous, innumerable and read by no one. Now if, choosing amongst the noted men who at this period seceded from the School, we take but two of those just named—Bossuet and Fénélon—we shall find that neither of them cared for those discoveries which, according to the above-stated view, had overthrown Peripateticism.[1] On the other hand, Leibniz, who was certainly not behind his time as regards Natural Philosophy, is far from unfriendly to Scholasticism, which he may be said to imitate in several parts of his doctrine. Thus in many respects his 'monads' correspond with the 'formæ' of the School. Like them, they are non-composite, inextended and incorruptible; like them, they form the vital principle in plants, animals and men; like them, they make up the totality of the substance of all spirits, including God, who in one system is 'forma purissima,' and in the other is 'the monad of monads'. Nor does Leibniz himself hesitate openly to avow his obligations to Scholasticism. These examples will perhaps suffice to prove that the alleged cause does not afford anything like a sufficient reason for the change that took place.

To find out the real cause, it will be necessary to go a few

[1] Bossuet, in particular, states very explicitly his opinion that mathematical and natural science in general is a study too frivolous for a member of the clergy; and there is little room to doubt that his opinion was that of the majority in his time.

centuries back, and take the School at the most brilliant period of its existence.

The Scholastic movement, arising from the desire to justify their convictions felt by all thinking believers of that period, may be not unaptly styled, in the words of Anselm, as "*Fides quaerens intellectum*". The Western world owed too much to the Church that had only just helped it to escape from the horrors of barbarism, to think of calling in question the truth of those doctrines by which it had become what it was. This degree of independence was reserved to a later age, when the memory of those benefits was less fresh in the minds of men. At that time the question was not: Are the doctrines of Catholicism true? but: The doctrines of Catholicism being true, how are we to prove their truth, or defend them from the imputation of absurdity? Such was the principal tendency of all leading minds during the tide of thought which, beginning with Anselm, reached its highest point in the days of Thomas Aquinas. Now, this tendency met, at the very outset, with what was considered as the great sum of human learning—the works of Aristotle, then expounded by none but Mohammedans like Algazali, Ibn Roshd and Ibn Sina, or Jews like Samuel Halevi and Rabbi Moses ben Maimon; these expositions being of course far from satisfactory to Catholic convictions. The Schoolmen were free either to set Aristotle completely aside, and strike out a new path for themselves; or to follow him as far as he possibly could be followed, explaining him favourably whenever they could, and accepting his authority almost without discussion on all points that were secondary, *i.e.*, that had nothing to do with religion. In this case, the law that every motion follows the line of least resistance held good. One by one, the theories of Aristotle were brought into agreement, if not positive and auxiliary, at least negative and neutral, with the doctrines of the Church; doubtful passages were expounded favourably, gaps in his doctrine were filled up, until at last very little indeed remained to reject. St. Thomas sets openly aside one only of the more important positions of Aristotle—the admission of an eternal universe. Yet he does not think that the universe cannot possibly be eternal, but maintains that its non-eternity is only probable, not sure; if he is convinced that the world had a beginning, it is on account of God's revelation.[1] At this

[1] *Sum. contra Gentiles*, l. ii., c. 38.—In the *Summa Theologica* St. Thomas, urged by the arguments against the eternity of a material universe, points out that he only meant to maintain the general possibi-

moment the ancient philosophy and the new faith were as much at one as they ever could hope to be; and the end of Scholasticism was gained.

We should not scorn these efforts of the human mind. In an age in which faith is little better than a mere word, we can scarcely conceive the living and intense reality which it had in those ruder times; the agony felt by those thinkers who perceived a contradiction between faith (where doubt was criminal) and science (where denial was absurd) was then extreme. And it was surely an immense benefit when Scholastic philosophy set both conscience and reason at ease, when science could be studied without crime, and religion believed without absurdity.

This was a rare triumph; but with the triumph decay began. No method as yet found out is able to compete in perfection with the sternly logical plan of the Scholastics. Two reasoners are placed face to face: one of them defends a proposition, the other attacks it. He who attacks has to prove by means of two short premisses his conclusion, *i.e.*, the negative of the proposition which the defender maintains. The latter, admitting or waiving the least doubtful of these premisses, challenges his antagonist to prove the other; or he takes a distinction that destroys all the force of his opponent's syllogism, unless he goes on to prove either of his premisses, *as thus distinguished*. No useless oratory, no pages of oracular obscurity, no string of questions leading one cannot tell where, are allowed: from the very first you know what your adversary is aiming at and how he intends to reach it. Such was the method of public debate; such was also the method pursued by the thinker in his cell: he successively attacked and defended the same proposition, and by that means went as deep into the heart of the question as the human mind could go. And yet this, even this, method availed very little in the way of progress. Scholasticism, after the death of St. Thomas, just like Peripateticism after Aristotle's death, hardly took a single step forwards. The onward movement which, beginning with Anselm, culminated in the 'Angelic Doctor' also terminated with him. Every conclusion arrived at by the mighty Master was contested—often enough not without reason—by his successor and rival, Duns Scotus. The defect is in the method: though the best extant, it is all but worthless.

lity of an eternal *creature:* by which he seems to take refuge in a spirit-world that might be everlasting. All this in order to keep as close as possible to the "Philosopher".

We can easily see how cumbersome and awkward it becomes for practical use after the first few steps. Take any conclusion; for instance, *The soul is immortal.* This conclusion flows from two premisses. Each of these from two others. These two others proceed from two more. It is clear that, for any proposition removed from self-evidence by only ten degrees, an immense number of other propositions have to be brought forward and demonstrated. But this is not all. Supposing that each of these propositions has been proved, an assailant of the conclusion may at every step bring forward a distinction, which distinction must be borne in mind until we reach the axiom on which the whole is grounded; for if the axiom is not true in that sense, all is over. Therefore, if we suppose the above conclusion to be removed by 10 degrees from absolute certitude, 1024 axioms must be affirmed. And if it be said, to reduce this number, that many of those axioms may be identical, we must remember that at every step towards evidence they may be loaded with a new distinction—ten distinctions for each axiom! This is surely enough to differentiate them with a vengeance. Further, this work having been accomplished, the opponent comes forward and admits that his distinctions have been badly taken; but he says that this proves nothing in favour of our thesis, for he has a new set of distinctions that will overthrow the truth of our proposition. And the work is to begin anew, until the adversary is convinced that to assail us is a hopeless task. I think it may not be quite useless to point this out more clearly, by presenting the reader with a specimen of an imaginary conflict between an Idealist assailant and a Realist defender, carried on in strict Scholastic form. Most people have heard of these debates; but comparatively few, I believe, have any adequate idea of what they really are. Thus a twofold purpose will be served; for not only the defects of the Scholastic method, but also its merits, will be seen.

The assailant having first denied that *An external world exists*, which is of course asserted by the defender, proceeds to prove his case as follows :

No world independent of consciousness exists ;
Now, an external world is a world independent of consciousness ;
∴ No external world exists.

Defender. At the major premiss, 'No world independent of consciousness exists,' I take a distinction. No world independent of *all* consciousness? I waive that question. No world inde-

pendent of *my* consciousness exists? I deny it.—At the minor, 'An external world is a world independent of consciousness,' I counter-distinguish. Of *all* consciousness? I deny it. Of *my* consciousness? I grant that. By this distinction your argument is out of form and inadmissible.

Assailant. But no external world independent of *my* consciousness exists; ∴ your distinction is worthless.

Defender. I deny that.

Assailant. I prove it.

Nothing but a modification of myself exists;
Now, a world independent of my consciousness is not a modification of myself;
∴ No world independent of my consciousness exists.

Defender. At the major, 'Nothing but a modification of myself exists,' I distinguish. Exists *as my perception?* I admit that. Exists *as the cause* of my perception? I deny it.—As for the minor, 'A world independent of my consciousness is not a modification of myself,' I grant that. So I distinguish the conclusion: 'No world independent of my consciousness exists': *as my perception?* I grant it. *As the cause* of my perception? I deny that.

Assailant. But my perception and the cause of my perception are identical; ∴ your distinction is worthless.

Defender. I deny that.

Assailant. I prove it.

What is perceived by me is the cause of my perception;
But my perception is what is perceived by me;
∴ My perception is the same as the cause of my perception.

Defender. 'What is perceived by me is the cause of my perception:' here I distinguish. What is perceived by me *as something in myself* is the cause of my perception? That I deny. What is perceived by me *as something outside of myself* is the cause of my perception? I grant it.—As for the minor, 'My perception is what is perceived by me,' I counter-

distinguish. Is what is perceived by me *as something in myself?* I grant it. Is what is perceived by me *as something outside of myself?* I deny that. By this distinction, your argument is out of form, and inadmissible.

Assailant. But to perceive what is outside of self is absurd; ∴ your distinction is worthless.

Defender. I deny that.

Assailant. I prove it.

To have within self what is outside of self is absurd;

Now to perceive what is outside of self is to have within self what is outside of self;

∴ To perceive what is outside of self is absurd.

Defender. I distinguish your major. To have within self *really* what is *really* outside of self is absurd? That I admit. To have within self *ideally* what is *really* outside of self is absurd? I deny it.—I counter-distinguish your minor. To perceive what is outside of self is to have within self *really* what is *really* outside of self? I deny it. Is to have *ideally* within self what is *really* outside of self? I admit that. By this distinction your argument is out of form and inadmissible.

Of course the argument might be much further urged, but this fragment will be sufficient for my purpose, which is to point out the strong and the weak parts of the Scholastic method of research. Let any impartial reader say whether it is possible to put more clearly and powerfully that part of the question between Realists and Idealists which is here dealt with. I think not; and, to speak frankly, I believe that even the partial adoption of this method would go far to exclude the ceaseless complaints in discussion about 'one's meaning not having been understood,' which abound in the pages of MIND and other philosophical journals. But, on the other hand, either the attention is at last completely drawn off from the principal proposition which the assailant wishes to prove—that, for instance, no external world exists—or it becomes burdened to a most extraordinary degree, each new distinction doubling[1] the effort to be made. '*My* consciousness,' 'as of perception,' 'something within self,' 'ideally,'

[1] When I say 'doubling' I speak after my own experience. Others may probably retain those distinctions with more ease.

'as opposed to all consciousness,' 'as cause of perception,' 'something outside of self,' 'really,' must all be borne in mind; and all go to render the first proposition more and more complicated. In a short time the whole question is literally buried under a heap of distinctions. This is evidently fatal to progress, except to a very limited extent. If a man has to walk forward under the condition that at the first step he shall be charged with one pound only, at the second with two, and so on, doubling continually, how far will he go? Certainly the few steps he could take would be better than nothing at all; and if no other condition of walking were possible, that would have to be accepted, but still under protest. In the same way, the ponderous load of distinctions that encumber Scholastics in their march towards truth is such as to debar them from any but the simplest discoveries. And, in fact, we see among them doubt and uncertainty in almost every problem.

They agree as to fundamental points, but differ as soon as their principles have to be applied. On most secondary questions, every celebrated doctor had a little system of his own and a few resolute adherents who defended it tooth and nail. All of them admitted that our ideas have their origin from sense, by the action of the intellect; but when the question came as to *what* the sense-impression was in regard to the resulting idea—whether cause, or condition, or occasion, or matter *ex qua*, or simply matter *circa quam*,—they began to quarrel. That one infinite God exists flowed undoubtedly from their principles; but how that existence, infinitude and unity were to be best proved brought about another split in their camp. That man is free and God omniscient they all agree; but when they came to build theories by which to conciliate these two positions, their disagreements became so violent that the Pope had to forbid Jesuits and Dominicans from treating each other as heretics. And so on. Every forward step attempted since the time of St. Thomas showed the powerlessness of Scholasticism more and more clearly. That progress which is a necessary law in all human things had become impossible.

No other reason, if I mistake not, can account sufficiently for the fall of Scholasticism. It fell because its instrument, though the most powerful and the most perfect of all yet known, was too cumbersome to admit of a steady forward march. Now, if such be the case, the future of the revived system is not likely to be very brilliant. The instrument is the same; the doctrines are merely a return to the old positions (*minus* the mediæval physics) proved in the old

way. And men will always be more inclined to try a new system that has not yet failed to satisfy them, than to return to an old one that has.

If this is granted, a twofold lesson may be learned. First, that all philosophers ought, as much as possible, to adopt the Scholastic method of reasoning and research, but provisionally, and so long as no better one is to be found. The Scholastic method—taken to mean the old way of debating a question syllogistically, turning both sides over in the mind—by no means implies either all or any of the Scholastic doctrines. Any reasoning whatever can be, more or less easily according as it is more or less complicated, put into syllogistic form, distinguished by an adversary, and taken up and demonstrated again by its propounder, without the slightest reference to any of the peculiar dogmas of the School. On the other hand, is any progress possible by means of the slovenly logic of ordinary philosophical thinking such as we too often see it now-a-days? The answer is in the history of philosophy for the last two centuries. The innate ideas of the Cartesians provoked Locke's doctrine of perception; Locke's doctrine of perception culminated in the idealism of Berkeley, and this, urged to its fullest extent by Hume, brought us back to that very scepticism with which Descartes started; and this circular philosophical movement is such, that no one, though we all know that there must be a fallacy somewhere, has succeeded in unmasking the fallacy in a satisfactory manner. Now, would it be too presumptuous to hint that if Descartes and the rest had from the very beginning (at the cost, I know, of infinite trouble to themselves) kept strictly to the Scholastic method in the new road which they opened out to speculation, we might perhaps not be now just where we were two centuries ago?[1] That we should have gone very far forward is not likely, when we consult the past; but even a very few steps forward would be preferable to the present state of things.

But the other part of the lesson of Neo-Scholasticism is by far the most important one. When I say that the method of the Scholastics is now abandoned, I mean that we have abandoned only the improvements in reasoning which they introduced — the rigid quasi-mathematical clearness and precision of their procedure. We make syl-

[1] I by no means wish to depreciate the merits of Kant and the other great thinkers who followed: but frankly, have they undone or cut the Gordian knot *to general satisfaction?* Has any solution even a large majority of the philosophical world in its favour?

logisms and distinctions as heretofore, in our reasonings and our objections, whether raised or answered; but we no longer place them in the vivid light of old times. A razor, if never sharpened, becomes no better than a knife. But what we want for progress is neither the sharpened logic nor the blunt logic, but *a new instrument*. Since even the perfected apparatus of Aristotle can do very little in such abstruse questions as those of metaphysics—since the imperfect apparatus can do nothing at all—we should use the first while we have nothing else at hand, but all the while try to find a better. This desideratum, as I understand it, has nothing in common with the methods of Descartes, Kant and many others. Both Descartes and Kant adopted a peculiar method of *using* the instrument of logic, the former by his dubitative, and the latter by his transcendental, method; but this is only a new adaptation of an old instrument, just as learning to swim does not add a pair of fins to the swimmer's limbs. Perhaps I can set this forth more clearly by noting two of the principal advantages which such a 'Novum Organon' ought to possess.

First, it should, in some way or other, enable us to dispense with distinctions, at least as much as the mathematical sciences dispense with them. There is a standing joke among Scholastics concerning a very easy distinction indeed: "*Sub uno respectu, concedo; sub alio, nego*". But they do not notice that the joke points to a vital defect in their method. This distinction, because not unmeaning, though vague, can be applied to any metaphysical reasoning whatever. We can always suppose a distinction possible, whenever we have only *words* to fix our ideas; for words by themselves convey nothing but the knowledge of their own sound. This is obviously a great drawback, now as of old, in all metaphysical discussions; but in mathematics the case is different. 'A right line is the shortest possible between two points; now, if so, two sides of a triangle are together longer than the third; therefore, &c.' Let us try to insert a distinction here, and we shall find that even that vaguest of all distinctions above mentioned is meaningless and absurd. Why so? Because in this case our mind is fixed and guided by the diagram that we have before our eyes. We at once see that there is no taking a right line in any 'other' point of view that would make it longer than the shortest between two points. Mere words without any diagram, in or out of the mind, to refer to, would never tell us that.

This leads us to the second requisite of the 'New Instru-

ment'. Words being distinguishable *ad infinitum*, it would have to possess some other means of fixing and guiding the mind. Plato, knowing the small power of abstruse conceptions to arrest the attention, appealed to imagination and poetic fancy, not without much effect. But Plato's images only fix, and do not direct the mind; or if they do, it is only under one particular aspect. So far as they correspond with their objects, they are useful, but a point must come where they no longer correspond. If the soul is a charioteer and the passions the horses, then the body is the chariot, and we see that the soul ought to rule its passions and not be ruled by them. But what of the horses' manes, hoofs and tails?—what of the axle-trees, the shafts and traces? They do not enter into the comparison, and the correspondence fails. So with all his other similes: they were never meant to enlighten more than one particular point.

If we notice the relation between mechanical forces and the lines used to represent them in diagrams, we shall perhaps get nearer still to the method according to which ideas ought to be represented. Like ideas, forces are mere abstractions. Like them, they are by themselves mere general representations of facts. They are not lines; they are not extended in space, nor divisible into parts of space: all we can say of them, admitting their hypothetical existence, is that they act in space. Yet they are represented by lines, and so well that the correspondence is perfect throughout for all reasonings which we may wish to follow in regard to them. Now, though there is a vast difference in point of intricacy between ideas and forces, still there may be something similar. And the great problem might be stated thus: How to represent ideas visibly so that their visible representations shall bear the same relations to each other as their invisible prototypes. This may be a search as visionary as the search for perpetual motion. If so, there will perhaps be no help for it but to fall back for ever on the perfected system of reasoning by words alone invented by Aristotle and used by the Scholastics.

VI.—DISCUSSION.

THE KANTIAN CONCEPTION OF FREE WILL.

By Professor H. Sidgwick.

In a little book published two years ago, *Outlines of the History of Ethics*, I had to give a brief account of Kant's ethical doctrine. As regards the notion of Free Will—which is fundamental in Kant's system—I thought it right to draw attention to a confusion which I found in his exposition between two notions of Freedom: (1) the Freedom that is only realised in right conduct, when reason successfully resists the seductions of appetite or passion, and (2) the Freedom to choose between right and wrong, which is, of course, equally realised in either choice. When I wrote, I was not able to conjecture how far my view would be disputed; but I gather, from reviews and otherwise, that it does not commend itself to several persons who consider themselves competent interpreters of Kant, and whose claims to be so regarded I have no desire to question. I have, therefore, thought that it would be well to state my grounds for attributing this confusion of thought to Kant, at greater length than I could properly state them in the little historical manual to which I have referred. And it appeared to me that such a statement might, perhaps, have more than a merely historical interest. For it may be inferred from the importance attached to the question of the Freedom of the Will in several recent treatises on Ethics—I may mention especially two that have been very cordially received, Green's *Prolegomena to Ethics*, and Dr. Martineau's *Types of Ethical Theory*—that the question of Free Will is not yet antiquated in the view of thoughtful persons generally. Indeed, we may say that it occupies a firm and challenging position on the threshold of the subject, so that it can hardly be passed without some sort of struggle, even by those who—like myself—seek to evade the Sphinx rather than to solve her riddle. And if the question has to be argued at all, it seems to me that the distinctions which it will be my aim to make clear, in discussing the confusion that I allege to exist in Kant's ethical doctrine, are of permanent importance.

In the present paper, however, I do not wish either to argue directly the question whether the will is free, or to 'move the previous question' whether the term freedom can with propriety be applied—even interrogatively—to the human will. My direct aim is merely to show that, in different parts of Kant's exposition of his doctrine, two essentially different conceptions are expressed by the same word freedom; while yet Kant does not appear to be conscious of any variation in the meaning of the term.

I will begin by explaining more fully the difference between the two meanings which Kant appears to me to confound. Perhaps, I may most conveniently do this by referring to the book through which my attention was first drawn to the importance of the question in relation to the present state of thought. I refer to *Essays in Philosophical Criticism*, which, if not exactly the work of professed disciples of Kant, at any rate seems to have for its declared aim the development of the results of Kantian criticism of knowledge and morals. In an essay on the "Rationality of History," by Mr. D. G. Ritchie, in which history is represented as a "struggle towards rational freedom," the following account is given of what the writer regards as the true meaning of Freedom:—"It is because and in so far as man is rational that he is free: and in so far as each man acts more under the guidance of reason, and less under that of blind, *i.e.*, merely natural impulse or passion, he is more of a free agent".

Now, I do not in the least object to this use of the term Freedom, on account of its deviation from ordinary usage. On the contrary, I think it has much support in men's natural expression of ordinary moral experience in discourse. In the conflict that is continually going on in all of us, between non-rational impulses and what we recognise as dictates of practical reason, we are in the habit of identifying ourselves with the latter rather than with the former: as Whewell says, "we speak of Desire, Love, Anger, as mastering us, and of ourselves as controlling them"—we continually call men "slaves" of appetite or passion, whereas no one was ever called a slave of reason. If, therefore, the term Freedom had not already been appropriated by moralists to another meaning—if it were merely a question of taking it from ordinary discourse and stamping it with greater precision for purposes of ethical discussion—I should make no objection to the statement that "a man is a free agent in proportion as he acts rationally". But, I think, it will be admitted that what English defenders of man's free agency have generally been concerned to maintain, is that "man has a freedom of *choice* between good and evil," which is realised or manifested when he deliberately chooses evil just as much as when he deliberately chooses good; and it is clear that if we say that a man is a free agent in proportion as he acts rationally, we cannot also say, in the same sense of the term, that it is by his free choice that he acts irrationally when he does so act. The notions of Freedom must be admitted to be fundamentally different in the two statements: and though usage might fairly allow the word Freedom to represent either notion, if only one or other of the above-mentioned propositions were affirmed, to use it to represent both in affirming both propositions is obviously inconvenient; and it implies a confusion of thought so to use it, without pointing out the difference of meaning.

If this be admitted, the next thing is to show that Kant does use the term in this double way. In arguing this, it will be convenient to have the names for what we admit to be two distinct ideas. Accordingly, the kind of freedom which I first mentioned—which a man is said to manifest more in proportion as he acts more under the guidance of reason—shall be referred to as 'Good' or 'Rational Freedom,' and the freedom that is manifested in choosing between good and evil shall be called 'Neutral' or 'Moral Freedom'.[1]

But before I proceed to the different passages of Kant's exposition in which 'Good Freedom' and 'Neutral Freedom' respectively occur, it seems desirable to distinguish this latter from a wider notion with which it may possibly be confounded, and which it would be clearly wrong to attribute to Kant. I mean the "power of acting without a motive," which Reid and other writers, on what used to be called the Libertarian side, have thought it necessary to claim. "If a man could not act without a motive," says Reid, "he could have no power"—that is, in Reid's meaning, no free agency—"at all." This is the kind of Freedom which the essayist above quoted contrasts with Good Freedom as "unintelligible caprice," and to which Green, in his chapter on the Freedom of the Will, refers in a similar tone as "some unaccountable power of unmotived willing" whose manifestations would be "arbitrary freaks". This conception of Freedom—which I may conveniently distinguish as 'Capricious Freedom'—is, as I said, certainly not Kantian: not only does he expressly repudiate it, but nowhere—so far as I know—does he unconsciously introduce it. Indeed it is incompatible with any and every part of his explanation of human volition: the originality and interest of his defence of Neutral Freedom—the power of choice between good and evil—lies in its complete avoidance of Capricious Freedom or the power of acting without a motive *in any particular volition.* And it may be worth while observing that the distinction between Neutral Freedom and Capricious Freedom is present, in an inchoate and imperfect manner, even in Reid's doctrine. Though, as we have seen, he maintains the existence of Capricious Freedom, still, the only part of his argument that I find at all interesting is that in which he elaborately avoids denying that "the strongest motive always prevails" where the contest is only among non-rational motives, such as animal appetites,—though such a denial would seem to be implied in his conception of a power of acting without a motive. His argument against the proposition that "the strongest motive always prevails" is that—unless we measure strength *merely* by

[1] The terms 'rational' and 'moral' seem to me most appropriate when I wish to suggest the affinity between the two notions: the terms 'good' and 'neutral' seem preferable when I wish to lay stress on the difference.

actual prevalence and reduce the proposition to a tautology—we must recognise that we have in our nature two different and disparate measures of the strength of motives: that motives addressed to our animal nature which, tried by the test of feeling, are strongest may yet be, in the eye of reason, weakest, and, similarly, motives strongest according to the test of reason may be weakest according to the test of feeling; and that "the grand and important competition of contrary motives is between the animal on the one hand and the rational on the other". Hence, though Reid maintains, as a psychologist, that the "power to act without a motive" belongs to the human being as such, he admits that the "grand and important" question for the moralist does not relate to this power, but to the power of deciding the conflict between rational and non-rational motives, "between the flesh and the spirit"—in short, to what I have called 'Neutral' or 'Moral,' as distinct from 'Capricious' Freedom.

I lay stress on this distinction, because it helps me to understand how many intelligent readers have failed to see in Kant's exposition the two Freedoms—Good or Rational Freedom and Neutral or Moral Freedom—which I find in Kant. They have their view fixed on the difference between Rational or Moral Freedom, which Kant maintains, and the Freedom of Caprice, which he undoubtedly repudiates: and are thus led to overlook with him the distinction between the Freedom that we realise or manifest in proportion as we do right, and the Freedom that is realised or manifested equally in choosing either right or wrong. When we have once put completely out of view the Freedom of Caprice, the power of acting without a motive, or against the strongest motive when the competition is among merely natural or non-rational desires or aversions,—when we have agreed to exclude this, and to concentrate attention on the difference between Good Freedom and Neutral Freedom—I venture to think that no one can avoid seeing each member of this latter antithesis in Kant. It will be easily understood that, as he does not himself distinguish the two conceptions, it is naturally impossible for the most careful reader always to tell which is to be understood; but there are many passages where his argument unmistakably requires the one, and many other passages where it unmistakably requires the other. Speaking broadly, I may say that, wherever Kant has to connect the notion of Freedom with that of Moral Responsibility or moral imputation, he, like all other moralists who have maintained Free Will in this connexion, means (chiefly, but not solely) Neutral Freedom—Freedom exhibited in choosing wrong as much as in choosing right. Indeed, in such passages it is with the Freedom of the wrong-chooser that he is primarily concerned: since it is the wrong-chooser that he especially wishes to prevent from shifting his responsibility on to causes beyond his control. On the other hand, when what he has to prove is the possibility of disinterested obedience to Law as such, without the intervention

of sensible impulses, when he seeks to exhibit the independence of Reason in influencing choice, then in many though not all his statements he explicitly identifies Freedom with this independence of Reason, and thus clearly implies the proposition which I began by quoting from a developer of Kantian doctrine, that a man is free in proportion as he acts rationally.

As an example of the first kind, I will take the passage towards the close of chap. iii. of the "Analytic of Practical Reason,"[1] where he treats, in its bearing on Moral Responsibility, his peculiar metaphysical doctrine of a double kind of causation in human actions. According to Kant, every such action, regarded as a phenomenon determined in time, must be thought as a necessary result of determining causes in antecedent time—otherwise its existence would be inconceivable—but it may be also regarded in relation to the agent considered as a thing-in-himself, as the "noümenon" of which the action is a phenomenon: and the conception of Freedom may be applied to the agent so considered in relation to his phenomena. For since his existence as a noümenon is not subject to time-conditions, nothing in this noümenal existence comes under the principle of determination by antecedent causes: hence, as Kant says, "in this his existence nothing is antecedent to the determination of his will, but every action . . . even the whole series of his existence as a sensible being, is in the consciousness of his supersensible existence nothing but the result of his causality as a noümenon". This is the well-known metaphysical solution of the difficulty of reconciling Free Will with the universality of physical causation: I am not now concerned to criticise it,—my point is that if we accept this view of Freedom at all, it must obviously be Neutral Freedom: it must express the relation of a noümenon that manifests itself as a scoundrel to a series of bad volitions, in which the moral law is violated, no less than the relation of a noümenon that manifests itself as a saint to good or rational volitions, in which the moral law or categorical imperative is obeyed. And, as I before said, Kant in this passage—being especially concerned to explain the possibility of moral imputation, and justify the judicial sentences of conscience—especially takes as his illustrations noümena that exhibit bad phenomena. The question he expressly raises is "How a man who commits a theft" can "be called quite free" at the moment of committing it? and answers that it is in virtue of his "transcendental freedom" that "the rational being can justly say of *every unlawful action* that he performs that he could very well have left it undone," although as phenomenon it is determined by antecedents, and so necessary; "for it, with all the past which determines it, belongs to the one single phenomenon of his character which he makes for himself, in consequence of which he imputes to himself" the bad actions

[1] *Werke*, v., pp. 100-104 (Hartenstein).

that result necessarily from his bad character taken in conjunction with other causes. Hence, however he may account for his error from bad habits which he has allowed to grow on him, whatever art he may use to paint to himself an unlawful act he remembers as something in which he was carried away by the stream of physical necessity, this cannot protect him from self-reproach:—not even if he have shown depravity so early that he may reasonably be thought to have been born in a morally hopeless condition—he will still be rightly judged, and will judge himself "just as responsible as any other man": since in relation to his noümenal self his life as a whole, from first to last, is to be regarded as a single phenomenon resulting from an absolutely free choice.

I need not labour this point further; it is evident that the necessities of Kant's metaphysical explanation of moral responsibility make him express with peculiar emphasis and fullness the notion of what I have called Neutral Freedom, a kind of causality manifested in bad and irrational volitions no less than in the good and rational.

On the other hand, it is no less easy to find passages in which the term Freedom seems to me most distinctly to stand for Good or Rational Freedom. Indeed, such passages are, I think, more frequent than those in which the other meaning is plainly required. Thus he tells us that "a free will must find its principle of determination in the [moral] 'Law,'"[1] and that "freedom, whose causality can be determined only by the law, consists just in this, that it restricts all inclinations by the condition of obedience to pure law".[2] Whereas, in the argument previously examined, his whole effort was to prove that the noümenon or supersensible being, of which each volition is a phenomenon, exercises "free causality" in unlawful acts, he tells us elsewhere, in the same treatise, that the "supersensible nature" of rational beings, who have also a "sensible nature," is their "existence according to laws which are independent of every empirical condition, and therefore belong to the autonomy of pure [practical] reason".[3] Similarly, in an earlier work, he explains that "since the conception of causality involves that of laws . . . though freedom is not a property of the will depending on physical laws, yet it is not for that reason lawless; on the contrary, it must be a causality according to immutable laws, but of a peculiar kind; otherwise, a free will would be a chimæra (*Unding*)".[4] And this immutable law of the "free" or "autonomous" will is, as he goes on to say, the fundamental principle of morality, "so that a free will and a will subject to moral laws are one and the same".

I have quoted this last phrase, not because it clearly exhibits the notion of Rational Freedom,—on the contrary, it rather

[1] *Werke*, v., p. 30. [2] *Ib.*, p. 83. [3] *Ib.*, p. 46. [4] *Werke*, iv., p. 294.

shows how easily this notion may be confounded with the other. A will subject to its own moral laws *may* mean a will that, so far as free, conforms to these laws; but it also *may* be conceived as capable of freely disobeying these laws—exercising Neutral Freedom. But when Freedom is said to be a "causality according to immutable laws" the ambiguity is dispelled; for this evidently cannot mean merely a faculty of laying down laws which may or may not be obeyed; it must mean that the will, *quâ* free, acts in accordance with these laws;—the human being, doubtless, often acts contrary to them; but then, according to this view, its choice in such actions is determined not "freely" but "mechanically," by "physical" and "empirical" springs of action.

If any further argument is necessary to show that Kantian "Freedom" must sometimes be understood as Rational or Good Freedom, I may quote one or two of the numerous passages in which Kant, either expressly or by implication, identifies Will and Reason; for this identification obviously excludes the possibility of Will's choosing between Reason and non-rational impulses. Thus in the *Grundlegung zur Metaphysik der Sitten*,[1] he tells us that "as Reason is required to deduce actions from laws, Will is nothing but pure practical reason"; and, similarly, in the *Kritik der praktischen Vernunft*, he speaks of the "objective reality of a pure Will or, *which is the same thing*, a pure practical reason".[2] Accordingly, whereas in some passages[3] the "autonomy" which he identifies with "Freedom" is spoken of as "autonomy of *will*," in others we are told that the "moral law expresses nothing else than autonomy of the pure practical *reason*: that is, Freedom".[4]

I think that I have now established the verbal ambiguity that I undertook to bring home to Kant's account of Free Will; I have shown that in his exposition this fundamental term oscillates between incompatible meanings. But it may, perhaps, be thought that the defect thus pointed out can be cured by a merely verbal correction: that the substance of Kant's ethical doctrine may still be maintained, and may still be connected with his metaphysical doctrine. It may still be held that Reason dictates that we should at all times act from a maxim that we can will to be a universal law, and that we should do this from pure regard for reason and reason's law, admitting that it is a law which we are free to disobey; and it may still be held that the reality of this moral freedom is to be reconciled

[1] *Werke*, iv., p. 260 (Hartenstein).

[2] *Werke*, v., p. 58. See an acute discussion of Kant's perplexing use of the term "Will" in Prof. Schurman's *Kantian Ethics*, which has anticipated me in the above quotations.

[3] *E.g.*, *Werke*, iv., p. 296.

[4] *E.g.*, *Werke*, v., p. 35.

with the universality of physical causation by conceiving it as a relation between the agent's noümenal self—independent of time-conditions—and his character as manifested in time; the only correction required being to avoid identifying Freedom and Goodness or Rationality as attributes of agents or actions.

I should quite admit that the most important parts both of Kant's doctrine of morality, and of his doctrine of Freedom may be saved:—or I should perhaps rather say that the latter may be left to conduct an unequal struggle with the modern notions of heredity and evolution: at any rate I admit that it is not fundamentally affected by my present argument. But I think that a good deal more will have to go from a corrected edition of Kantism than merely the "word" Freedom in certain passages, if the confusion introduced by the ambiguity of this word is to be eliminated in the manner that I have suggested. I think that the whole topic of the "heteronomy" of the will, when it yields to empirical or sensible impulses, will have to be abandoned or profoundly modified. And I am afraid that most readers of Kant will feel the loss to be serious; since nothing in Kant's ethical writing is more fascinating than the idea—which he expresses repeatedly in various forms—that a man realises the aim of his true self when he obeys the moral law, whereas, when he wrongly allows his action to be determined by empirical or sensible stimuli, he becomes subject to physical causation, to laws of a brute outer world. But if we dismiss the identification of Freedom and Rationality, and accept definitely and singly Kant's other notion of Freedom as expressing the relation of the human thing-in-itself to its phenomenon, I am afraid that this spirit-stirring appeal to the sentiment of Liberty must be dismissed as idle rhetoric. For the life of the saint must be as much subject—in any particular portion of it—to the necessary laws of physical causation as the life of the scoundrel: and the scoundrel must exhibit and express his characteristic selfhood in his transcendental choice of a bad life, as much as the saint does in his transcendental choice of a good one. If, on the other hand, to avoid this result, we take the other horn of the dilemma,—if we accept the development of Kantian criticism which Mr. Ritchie and his friends offer us, and identify inner freedom with rationality,—then a more serious excision will be required. For, along with 'Neutral' or 'Moral' Freedom, the whole Kantian view of the relation of the noümenon to the empirical character will have to be dropped, and with it must go the whole Kantian method of maintaining moral responsibility and moral imputation: in fact, all that has made Kant's doctrine interesting and impressive to English advocates of Free Will (in the ordinary sense), even when they have not been convinced of its soundness.

IMPERSONAL PROPOSITIONS.

By John Venn.

In reading the able and instructive logical essay, *Die Impersonalien*, which Prof. Sigwart has just published [for brief general notice, see below, p. 463.—Ed.], one thing that seems to me to come out clearly is the advantage of a broad survey of the various devices adopted in different languages for the expression of these forms of proposition. So long as we look only to the English, in which the impersonal propositions are comparatively few, one might be inclined to adopt the view which the general teaching of Formal Logic rather tends to enforce: the view, namely, that the predicative form is the only regular and common one, and that the others are always to be regarded as mere contractions of this, or as forms of a primitive kind which have not yet expanded themselves into their due proportions; and that in any case a subject is wanted to render even their meaning complete. This view would hardly be adopted by anyone familiar with the symbolic renderings of Logic,—at least with those founded on the general scheme of Boole,—for in these we resolutely interpret *every* proposition into an assertion of the existence or non-existence of some particular combination. Accordingly, here the existential, and therefore impersonal, form becomes the universal one; and we are perpetually being reminded that any proposition, however naturally appropriate to it might be the ordinary predicative form, will adapt itself, at any rate in the language of symbols, to the alternative form. It is, however, none the less desirable to be reminded that the actual usage of existing and highly-cultivated languages is very variable in this respect, and that the German, for instance, which makes a very large use of the impersonal form, employs it in many classes of cases where the English invariably adopts the predicative. If there is any form of assertion which to us would seem naturally adapted for the latter, it is that in which we attribute a simple sensation to ourselves, for our own personality is about the most natural and appropriate 'subject' to the reflective mind which we can well conceive. Accordingly, if we thought only of our own usage, we might argue that 'I am cold,' in which 'I' stand prominent, and the 'cold' is regarded as an attribute, was the peculiarly appropriate expression. But the German says 'Es friert mich'; and so in many other cases.

I judge that, on the whole, Prof. Sigwart adopts much the same view that I incline towards myself; but I give it here rather in a form of my own, because in a brief note it is easier to do justice to oneself than to another. On this view, when we look to the actual subject-matter about which we have occasion to make assertions and denials, we can trace two broadly contrasted

classes of things or events, which are respectively the appropriate material for a 'subject-and-predicate,' and for what may be called an 'existential' form of proposition. There is nothing, however, to show that either kind of subject-matter is one of earlier recognition than the other, or that consequently the form of proposition appropriate to it is either intrinsically more primitive, or more likely ultimately to prevail, than the other. But when we have the two forms of proposition in familiar use, we find ourselves able without much trouble to extend either of them over a large part of the province which lies between their most appropriate applications: indeed, it is difficult to say that either of the two cannot be employed for any purpose of assertion or denial whatever.

The typical instances of the contrasted classes mentioned above seem to me to be the following. On the one hand, there are substances, which possess a considerable number of permanent attributes, sufficient, so to say, to yield a solid nucleus: solid enough to bear the detachment of the predicate-attribute without interfering with the integrity of the subject. In such a case the difficulty often felt in removing an attribute to the place of predicate, and yet treating the subject as if it were unaltered, by retaining its name unchanged, is not seriously felt. I can say 'The fruit is green' or 'The lion is enraged,' without feeling that the attributes which I have thus detached from the subject and relegated to the predicate have in any way interfered with its comparatively massive and unchangeable character. To such cases as these, therefore, the apparently contradictory assumption of a fixed subject with variable attributes seems peculiarly appropriate. On the other hand, we meet with groups of events with no underlying bond of a single substance to give them their unity. The occurrence of a storm is a good case in point. What we want to indicate is the combination of cloud, wind, rain, and possibly thunder and lightning. The machinery of subject and predicate seems intrinsically unsuitable for this. A far more natural way would seem to be to give a name to the combination as a whole, and to adopt some modification of this name to indicate that a thing corresponding to this combination was in occurrence. This is readily done by saying 'There is a storm' or 'It storms' (*'Es stürmt'*).

This seems to me to be the *rationale* of the distinction between the two common forms of proposition; and if so, it certainly suggests that neither of the two is essentially the more primitive or simple of the two, and also that neither of them is likely entirely to supersede the other. But it also suggests that between one of these typical cases and the other there are any number of intermediate cases, and that therefore we may often find it difficult to say which of the two forms is the most appropriate. Consider, for instance, the group of events known as an execution. Convention does not allow us to say 'It executes,' as

we say 'It blows' or 'It thunders,' because (if for no other reason) the group of phenomena is not one of familiar immemorial occurrence. But we can just as conveniently adopt the existential form, 'There was an execution,' as the predicative form, 'A man was hanged'; and as a matter of fact, one form would be as readily employed as the other. So with the group of events known as a coronation. To state that 'There was a coronation' or that 'The king was crowned' would be expressions of equal simplicity and obviousness.

But although there thus seems an appropriate sphere of use for each form, and no reason why either should ever come to be superseded, there also seems good ground for saying that the predicative form is distinctly the most accommodating of the two. It is so on account of its analytic character. The impersonal form demands a single term for the group of events whose occurrence is asserted, and the existential form demands either this or (unless we resort to the very unconventional forms admitted into Symbolic Logic) a very small combination of terms. Suppose, for instance, that a coronation had never been heard of, we could not, of course, employ any such simple form as 'There was a coronation,' any more than on the first occurrence of a storm could we say 'It blows' or '*Es stürmt*'. But in either case we could readily fall back upon the predicative form, in consequence of its analytic character. If the king in the former case, and the wind and rain in the latter, were already known and named we could make them the subject of our sentences, and predicate of the former that he had the crown put on him, and of the latter that it is strong, and so indicate the sort of event in question.

On the whole, therefore, I should be inclined to think that the purely impersonal form (*e.g.*, 'It freezes') is mainly confined to groups of phenomena which had been familiarly known from time immemorial; and the existential (*e.g.*, 'There was a coronation') to groups which have been known for a considerable time, so as to have acquired a common name; but that the subject-and-predicate form is of universal applicability. It is, in fact, the form which alone is available for progressive knowledge, and for the expression of new acquisitions or experience.

HALLUCINATION OF MEMORY AND 'TELEPATHY'.

By Edmund Gurney.

I have read with great interest Prof. Royce's paper under this title, in the last No. of Mind, p. 244, and I fully agree with him that the type of delusion to which he calls attention deserves very careful study. His ideas are not quite new to me; and in

Phantasms of the Living I have recognised them at any rate to the extent of again and again suggesting that special features of the experience described may have been "*read back*" into it, after the news of the corresponding event had reached the percipient. The reason why I did not bring forward the hypothesis that the *whole experience* was a delusion of memory, is simply that to hardly any of the cases on which stress is laid does it appear to me that that hypothesis is at all applicable.

To begin with, anyone who read Prof. Royce's paper, without having read the book to which it refers, would imagine that the argument for spontaneous telepathy depended on *dreams and presentiments*,[1] the latter word being taken in the sense of strong mental impressions, without sensory accompaniment, that something otherwise unknown and unlikely to be guessed is happening at a distance. These are the only types of phenomena that he mentions. But in the first place, in a great many of the included cases of each type, we have distinct evidence that the percipient mentioned his experience before the news of the corresponding event arrived. And, in the second place, it is expressly pointed out that these two types form, on independent grounds, the very weakest sort of evidence, and that the case for telepathy could not be made to rest on them alone.

It is disappointing to find so candid and friendly a critic as Prof. Royce actually limiting the strongest class of evidence—the class which, if there were more authentic specimens of it, would afford the most convincing proof, to "cases where the percipient A demonstrably wrote in a letter or in a diary, '*I believe that* B *is ill*,' or '*drowning*,' or otherwise uncomfortable, before the coincidence could have been verified". Such cases, if greatly multiplied, would of course have much force, provided it were practically certain that similar remarks were not written on occasions when there was *no* correspondence with reality. But it is perfectly arbitrary to confine the convincing coincidences to this particular type. As a matter of fact, by far the most convincing class, as the evidence now stands, is the one where the percipient receives no direct impression of anything that is happening to the distant person, but simply has a sensory hallucination which represents him, and makes a written record of this fact. Perhaps Prof. Royce meant to include such cases under his description, inasmuch as it has sometimes (by no means always) happened that the percipient has *inferred* from his experience that something unusual has befallen his friend; but, if so, it is odd that the distinctive feature of the actual experience should have been ignored. And if such cases be included, I must dissent from the view that they are so few as

[1] This word, which I have throughout avoided, is an unfortunate one, as it conveys the idea that the percipient's experience *preceded* the corresponding event.

to be "*probably* mere coincidences". I think that they are sufficiently numerous to make the doctrine of chances tell *primâ facie* the other way.[1]

I am quite content to accept Prof. Royce's view as to the comparative unimportance of cases, not supported by documentary evidence, which occurred more than ten years ago. But as regards the third class of cases which he mentions—cases of recent date where we have no record of the percipient's experience put into writing before the arrival of the news of the corresponding event—he seems to have ignored the support which is afforded to a large number of the accounts by the testimony of other persons that the percipient's experience was orally described before the arrival of the news. He says, "Members of the same family would be especially apt to be similarly subject to this form of delusion"; but though this might account, in some cases, for two or more members of a family, say A and B, having the same delusive memory that they had shortly before received an impression relating to C, it surely cannot commend itself as an explanation of their having quite different delusive memories—A having the memory that he had received an impression relating to C, and B the memory that A had described to him such an impression.

But my chief objection to Prof. Royce's hypothesis is of a more general kind, and relates not to points of evidence as such, but to the actual nature of the phenomena on which the proof of 'telepathy' depends. We have seen that he omits all mention of *sensory hallucinations;* and it seems impossible that he can have duly recognised their importance in the argument. However much it were proved that the news of an exciting event had a tendency to produce the impression that one had known of it before, we should have got a very little way towards proving that the receipt of exciting news about X had a tendency to produce, in a sane mind, the impression of having recently seen X in a place where he was not, not announcing, often not even suggesting, his actual condition, and without any exciting concomitants. Phenomena of this sort may be very hard to account for completely on any simple theory of *thought-transference;* but if the coincidences happen too frequently to be accounted for by chance, they form a complete proof of *telepathy.*

It is worth adding that the assignment of the experience in memory to a particular time constitutes a further most vital difference from the familiar illusions of "double memory," where "the feeling that one has been here before" is quite unlocalised in past time.

[1] See cases 21, 23, 31, 33, 98, 153, 168, 194, 220, 303, 685, 695, and 197—the last case to be taken in connexion with the additional evidence given in my paper in the *Proceedings of the American Society for Psychical Research*, vol. i., part 4.

THE PSYCHOLOGICAL THEORY OF EXTENSION.

By the Editor.

The effort so often renewed since the days of Herbart to construct a psychological theory of Extension has so far had results that appear to be hardly more satisfactory to those who may be supposed to maintain than to those who discount the enterprise in principle. Some recent treatment of the subject by writers whose scientific earnestness is above question makes it worth while inquiring what may be the reason of the discontent or disagreement in regard to it so patent among psychologists. For this purpose I will here assume, without argument against those of the other way of thinking, that there is nothing in our perception of Extension to set it beyond psychological analysis. It is one thing, indeed, to seek to determine (psychologically) how we come by the perception, and quite another to determine (philosophically) what import is to be ascribed to the extension of body or to the space it appears to fill; but, this borne in mind, there is surely no more legitimate, or even imperative, task than to attempt to explain how body comes to appear as spread out in what we call space. Now why has this question failed to get a solution commanding something like general assent? I would suggest that it is chiefly because of the way in which it is too often taken up. It should be taken up, as I will try briefly to show, *after* and not before, or at least in definite and express relation to, a certain other question. The point has not been overlooked by some—for example, Prof. Bain and still earlier writers—but it has not been urged with all the persistence or consistency that the case seems to require; nor has it yet (that I know of) been urged at all in relation to the later manner of stating the problem that has come into vogue under German influence.

Among recent work on the space-question from the psychological point of view, I refer, of course, chiefly to Mr. Ward's now celebrated article in vol. xx. of the *Encyclopædia Britannica*, and to the remarkable series of dissertations by Prof. James that ran through last year's Mind. The work of these two writers may first be noted for the confession it seems to involve of something very like psychological impotence.[1] They have been, independently, driven to make assumption of an inherent character

[1] Compare Mr. F. H. Bradley's incidental remark in Mind xii. 369 n.: "All the attempts which I have seen made to derive extension from what is quite non-extended in my opinion break down". Mr. Ward had expressed himself to similar effect thus (*E. B.*, xx. 53 b.): "The most elaborate attempt to get extensity [? extension] out of succession and coexistence is that of Mr. Herbert Spencer. He has done perhaps all that can be done, and only to make it the more plain that the entire

in sensation that brings them perilously near, if it does not quite carry them over, to the position of those who contend that a psychological theory must always include among the elements of the explanation, though it may be under some disguise or other, the very fact of extension to be explained. With Prof. James, indeed, there is no disguise, and it is difficult to see in what respect he does not go over. All the pity that his historical epilogue showers upon Kantians that know themselves and (more liberally still) upon Kantians that know themselves not, does not alter the essential import of his own round declaration of a primitive experience of "bigness or extensiveness" in all sensation. Within their general assumption as to the nature of space, the followers of Kant have found it no less possible or necessary than Prof. James to inquire what are the precise factors of sense and intellect entering into our various perceptions of extension; and for the start it really matters very little, in the psychological point of view, whether space is called 'pure form' with (external) sensation for 'matter,' or whether we are told, as by Prof. James, that "extensiveness" is an empirical aspect of sensation, justifying the use of such terms as "sense-space," "spatial feeling," and even "sensation of line or angle"! This novel kind of psychological speech, if fit to raise the hair of other people besides Kantians, does yet not keep himself from saying, with any Kantian of them all, "that, within the range of every sense, experience takes *ab initio* the spatial form" (p. 30).

"*Ab initio*"?—there lies, in regard to the fact of "spatial form," the question for the psychologist as it has come to the front in this century, not least by reason of Kant's (philosophical) analysis carried so much deeper than anything attempted before. Let it, however, be observed in passing that, even for the psychologist, the question is not so much of beginning of the individual's mental life—in respect of which the truth may lie one way or the other according as the evidence, if only it could be forthcoming in any decisive shape, may determine—as of beginning of scientific consideration.[1] Is the spatial form, in which at least some (we need not now ask whether all) sensa-

procedure is a ὕστερον πρότερον." Whether Mr. Ward's own derivation of extension from or with help of 'extensity' is more satisfactory to Mr. Bradley does not appear. At all events, it is not covered by his remark; for the extensity claimed (as well as intensity) for sensation cannot be understood as "*quite* non-extended," if it is to do the work of explanation which, without it, Mr. Ward considers so hopeless. As to ὕστερον πρότερον, on one or other side in the case, something is to be said above.

[1] This is said not without reference to the argument conducted by Dr. E. Montgomery in his important series of articles on "Space and Touch" in MIND, vol. x. Dr. Montgomery's earlier contention, in the work on Kant with which he first came before the philosophical world (*Die Kantische Erkenntnisslehre widerlegt vom Standpunkte der Empirie*, München, 1871), seems to me to have lost nothing of its essential psychological value.

tions are experienced, so inextricably present with them from the first and always, that it cannot be viewed apart and reasonably shown to have a derivation from certain mental data presumably simpler? Now the allowance may at once be made that data of the kind usually assigned, at least in the way they are assigned or usually employed, fail to afford a satisfactory explanation. The data are 'muscular sensations,' in relation always with elements of (passive) touch and sight, and certain laws of intellectual grouping under which the sense-elements are supposed to be worked up. When the data of the so-called muscular sense are represented as 'feelings of movement,' the work of explanation is not, indeed, found difficult; but then, as has rightly been objected, the whole question is begged, since 'movement' plainly presupposes 'space'. If 'muscular sense' is understood in its purity as 'sense of effort,' we have, by the side of tactile and ocular sensation, merely another, though it may be a quite peculiar kind of intensive element; and the difficulty is then serious enough, how a variety of intensive elements can come, by any means of grouping, to assume in consciousness the appearance of an extended order. Through repetition, reversal, &c., elements apprehended at first in succession may very well end by appearing as coexistent, but it is still a far cry from coexistence-in-time to coexistence-also-in-space, which is the meaning of extension. How is the transformation to be effected? Or, rather, can it any way be effected? I do not know that it can, if sought for upon that line. But perhaps there may be no such difficulty, if it should appear that the problem of Extension is one not to be thus directly faced.

Doubtless, Extension is the fundamental aspect of the objective world as it offers itself to our apprehension. In our everyday view of things, which psychology has to render account of, space has the same appearance of external reality as the body that fills it; and extension is the one attribute that is common alike to body and to space. It must be a consideration of this kind that induces even Prof. Bain, with whom extension later on takes a secondary place, to begin his whole psychological doctrine with a distinction of "object" and "subject" as the Extended and Unextended—a distinction which Descartes and others are there to support with the metaphysical assertion that extension is the one essential attribute of whatever *is* other than mind. However it be with the metaphysical fact, which does not now concern us, certainly we must grant to the full the universality of the problem of Extension as it offers itself to the psychologist in regard to the world of sensible experience. It does not therefore follow that the problem is the first to be attacked in working out a theory of objective perception. Extension is the fundamental aspect of sensible object only in a logical point of view. There is every reason for asserting that it is not the historical *prius* in

our actual apprehension of object. Will anyone, upon reflection, maintain that a child becomes aware of Space, which is extended and only extended, before it is aware of Body, which is resisting as well as extended? It cannot seriously be doubted that we arrive at our perception of space by a literal evacuation of, and thus after, the fuller and more impressive perception of body. Now, if this be so, we surely have here the right clue to the order in which psychological explanation should be attempted.

The difficulty of the problem in the form now commonly given to it lies, we have seen, in getting elements of experience, all in the first instance describable as 'intensive' only, to acquire the 'extensive' character. Intensive experiences continue always to be referred to the subjective mental stream flowing on in time. On the other hand, experiences of the extended order—without ceasing to be interpretable as *experiences* (else they would not concern the psychologist)—have the appearance of being detached from the mental stream; and are then called 'objective'. Now so long as no suggestion of a reason is afforded why they should thus become detached, the difficulty remains unsolved. Within the mental stream intensive elements may, in the way before mentioned, become aggregated into what appear clusters of concurring events, but upon that line nothing more seems possible. Let them, however, in the form of such time-clusters, be experienced in connexion with something that is already construed as external object, and at once they may begin to take on a new character by reference to this. I have said 'external object' for the sake of definiteness, not because I am not well aware that the word 'external'—understood with reference to the bodily organism of the perceiver or in any other way—may be said, here again, to beg the whole question at issue. Upon the 'externality,' as such, no stress can rightly be laid at the outset. It is 'object' (in whatever vague or shadowy sense of a not-self) from which the start has to be made; and 'object'—as indeed the name implies—is just 'obstacle,' without at first implying anything more. All psychologists may be said now to be agreed upon this, that it is in the phase of resisted muscular activity that we first become conscious of a 'not-self' as opposed to 'self': not that we all at once achieve the distinction, but that we gradually attain it through experience of this kind. Analyse the experience, and again the elements are found to be merely intensive—intensity of (passive) touch varying with intensity of effort; yet here it is not to be denied that the touch is related to the effort in such a way as inevitably to suggest a cleft in conscious experience, which has but to be widened and defined for the opposition of self and not-self to become established. Now the point to be urged is that if only object, as bare obstacle to muscular activity of a touching organ, has already to any degree become differentiated in consciousness, a basis is got by reference to which the conjoined sensible experiences shown by analysis to

be involved in any perception of extension may begin to appear—not as the simply intensive experiences, of one kind or other, which they are in themselves, but—as constituents of object (as not-self). In point of fact, the development of the two aspects of external (bodily) object—resistance and extension—will proceed *pari passu* as soon as a beginning of both has been made; or, to put the case otherwise, body will not come to be perceived as definitely external till it is also perceived as definitely extended (in relation to an extended organism of the perceiver). But the first beginning must take place somehow; and this, upon the view here contended for, is to be sought in that aspect of object (as body) which we call Resistance, rather than in that aspect of object (either body or space) which we call Extension.

Apartness—which is another way of saying Extension—needs, in short, for its apprehension that something be supposed already there in which the particular kind of this-and-that meant in the word 'apart' may be manifested. The mistake of the space-theorists, generally, is to seek for an extension that is extension of nothing at all. No wonder, then, that those of them who take their task most seriously, finding the means proposed insufficient but not exactly considering why, are tempted into transforming these by assumptions that practically supersede the psychological question altogether. Let, however, the 'something,' in whatever vague sense of an experience of resisting object, be first got—as got it can be on psychological ground—and there is no longer the same difficulty of construing as extension other (more complex and varied) experiences that are had in connexion with the first. A base is wanted for the psychological operation. A psychological base is not wanting.

The reader has now but to look at the theory of Perception elaborated with so much care by Mr. Ward in his "Psychology" to see how completely is there reversed the order of explanation here maintained to be the natural and effective one. Like others who have followed the German lead in this matter, but with an independence and a thoroughness of treatment all his own, Mr. Ward first works out a space-theory in the vague, and only afterwards, under the head of "intuition of things," comes across the kind of considerations here regarded as fundamental in any psychological doctrine of perception. See, especially, what he says upon the second and the fifth of the "points" which, in the following order, he distinguishes in the complex presentation of an orange or piece of wax—(1) reality (actuality), (2) solidity or occupation of space (impenetrability), (3) continuity in time, (4) unity and complexity, (5) substantiality. Now, certainly, the intuition of "thing" is the culminating fact of perception—so much so, indeed, that there enters, I venture to think, a good deal more into the psychological account of its "substantiality," at least, than Mr. Ward, for all his care in distinguishing those various moments, appears to recognise

—but the psychologist is not therefore justified in keeping back till the later stage all reference to the simplest, the earliest and the most impressive of all our sense-experiences in the case. We do not first "attain a knowledge of space" by "movements of exploration," and then, "when these movements are definitely resisted or are only possible by increased effort," "reach the full meaning of body as that which occupies space" (p. 56a). Rather, as I have sought to argue, we first, through simple and direct effort put forth, get some kind of vague notion of body as resisting, and then by more complex efforts that are found to procure tactile impressions (continuous or discrete, as the case may be)—efforts not interpretable as *movements* till they have done their part in the work of psychological construction—we distinguish this and that extensively within such body, and the body as a whole in relation to our own bodily frame; later still, distinguishing from such extended body the (empty) space which it fills.

In Prof. James's elaborate theory of space-perception, the salient feature is not so much the direct consideration of extension by itself—though it is so considered—as the prominence given to questions of visual space, which it is his purpose to solve in terms of purely ocular experience. Upon this, it is not out of relation to the foregoing remarks to end with a certain note of interrogation. The service, indeed, should first be acknowledged which Prof. James has rendered to English psychology in forcing attention to questions which it has been too much the insular habit, since the days of Berkeley, to slur over with a merely general profession of Berkeleyan theory. There the facts of visual perception are, in all their variety and perplexity, as they have been made out by the patient labour of so many continental investigators. It is no small gain to have them now brought so definitely into English view, nor less to have them at the same time explained, with triumphant confidence, in the sense most shocking to English prejudice. But the query may not be suppressed: What is, then, with Prof. James and the physiological allies to whom he lends psychological authority, the meaning of visual perception? When, straightway at the beginning, he puts skin and retina without ado on one perceptive level, and applauds Hering's declaration that he, for his part, has ocular sensations not only of the surface-order but "roomy" altogether, one wonders if the thought has occurred to either how ocular sensations are had at all. It is not, of course, with eye only that we are visually conscious, nor again with anything that can be called 'visual centre,' more or less circumscribed as this may finally prove to be, in the brain; but (keeping, as for the present purpose we may, to physical terms) it is with the brain altogether—a brain that has never been known to develop the functional activity of perception without skin-impressions. People have lived and died without the use of eyes, but nobody has ever grown up with an insensitive skin. How can Hering,

then, or Prof. James, with a perceptive consciousness of touches all-compact, say what the eye alone shall in the way of space-perception be able to accomplish? How show that "roominess" —or, for that matter, surface either—which *their* eyes may readily be credited with beholding and in fact cannot help seeing, is an affair of mere ocular consciousness? Nor, in asking such questions, is it at all implied that the eye does not give, or rather procure, us everything that is highest and most commanding in our space-perception. It is not even implied that, if we could suppose ourselves reduced to the eye with its exploratory movements as our sole and only means of constructing a spatial order, such a construction might not come to pass—however far removed it would be in character from that of our actual experience. All that is meant is that, dependent as we are for all our basal experiences upon locomotive organs that are at the same time tactile, it is impossible for us through the eye to have a perception of space that is not ultimately, whatever its refinements of discrimination and consequent development of range, to be referred to the tactile base. This is the position that Berkeley took up, and it remains inexpugnable, let the particular ocular conditions be what they may that have farther to be taken into account before our visual experience in all its detail is satisfactorily explained. But in the position, rightly understood, it appears to be no less involved, as I have here sought to maintain, that the construction of tactile space needs again for *its* base a prior construction—no matter how inchoate—of tangible object.

VII.—CRITICAL NOTICES.

The Morality of Nations: a Study in the Evolution of Ethics. By Hugh Taylor. London: Kegan Paul, Trench & Co., 1888. Pp. 316.

A subject with such infinite variety of bearings as Ethics easily lends itself to different modes of treatment. Every phase of human development, every department of history, every aspect of man's life, gives to morality a peculiar point of departure. A complete ethics presupposes an exhaustive study of human nature in each and all its elements. Now psychology claims chief importance as an ethical discipline, now sociology; one philosopher sublimates morality into a metaphysical formula, another dissipates it into a social organism; here, it rises up into religion, and there, it is indistinguishable from law. There is room for all, if they are not exclusive; and there is need of a patient and comprehensive thinker if they are not to become dogmatically incomplete.

The present essay professedly shirks the main ethical question. Morality, as the author remarks, is a matter of self-adjustment, and individual effort can alone lead morality to progress (p. 257). The deepest root of morality lies in respect for our own personality ("individuality" Mr. Taylor quaintly calls it). The true source of good as of evil lies in the individual disposition of each political unit (p. 293). And as the source of all conduct is really there, so the highest type of moralisation lies in acquiring such an abstract basis of principle as makes a man a spontaneous and independent fountain of justice and goodness, not a mere channel through which runs a public and common beneficence. Yet though this is admitted, it is not in that direction that Mr. Taylor's investigations proceed. He finds this abstract idealism too good for human nature's daily food, and moral philosophers with their categorical duty have dwelt upon it to the extent of ignoring topics of greater practical and scientific interest.

Nor is Mr. Taylor a stranger to the theories which rest moral distinctions on certain instincts, senses, faculties and intuitions. Such instincts he adduces in large numbers. There are altruistic instincts in man just as there are egoistic appetites; there are germs of morality exhibited in sexual and parental love; there are indwelling instincts of order and self-government; jets of self-sacrifice penetrate the rock of selfishness; and a conviction that the rule of self-assertion would turn life into a chaos gives to the individual mind an eternal measure of right and wrong (p. 159). Morality has an intuitive force: conscience and moral sense raise their voice in the human mind.

There is, then, a moral sense; but it is not universal (p. 196), and it does not afford sufficient guidance for conduct even in those whom it inhabits. The problem which Mr. Taylor sets himself to solve is to consider how, in fact, the world of right, the rule of justice, has been established; how the majority has come to recognise and obey, at least in a sort of way, the moral intuition and "prophetic promptings" of its more gifted leaders. For—so he states his case—morality originates in the sporadic phenomenon, occurring now and again, of instincts of self-sacrifice and respect for others, which, through a favourable conjunction of circumstances, have, by an alliance with political power, succeeded in enforcing general submission to their dictates. Not in every people has morality been so invested with large authority. There are slow, unprogressive races which have never got beyond fossilised institutions, containing no germ of advance; and with such the question of ethical evolution has nothing to do. The student of the genesis of morals turns his attention to the advancing races which hand on one from another the torch of morality to the present day and to its most moralised communities.

But the morality which is thus fostered and handed down is not the morality of the individual—the ideal of the perfectionist or of the utilitarian. It is not the problem of self-adjustment we have to study, but of social adjustment and re-adjustment. It is the institution of right, law, justice,—the organisation of the medium in which morality may flourish,—the problem of Hobbes, in short, and not the problem of Kant, which Mr. Taylor hopes to solve. How does the fundamental idea of right—respect for the "individuality" of others—become a reality and not a mere faculty amongst other possibilities? For such possibilities are numerous.

To his own contributions on this point Mr. Taylor gives the misleading title of the "Antagonistic Theory of Morals," and he describes the morality he considers as the "morality of nations," *i.e.*, the morality which has its sphere of operation in the relation between man and man in those combinations that are called "nations". The abstract expression of such relations (and of these alone) constitutes the morality of which he speaks. It is his own admission that morality arose only when antagonism gave way to the principle of self-repression and accommodation: that morality (by which, of course, is always meant right) is combination, or, to speak more correctly, the terms and conditions of combination. But that does not hinder Mr. Taylor from stating that "morality is the result of destructive antagonism," and that "antagonism is the central fact from which a moral theory has to start". He complains that moral philosophers have not done their duty by the phenomenon of war. They pass lightly by its horrors, and they offer no explanation of its origin and function. No doubt the moralist *pur sang* no more

discusses the institution of war than he questions the legitimacy of the family-tie. But the moral philosopher who rises to the height of his great argument has never failed to point out the necessary function of the god of battles in a world like ours, where offences must needs come. What Mr. Taylor's explanation amounts to is as follows. The first tendency of all organic beings is towards antagonism (p. 214). Mere proximity is a sufficient reason for contest. The dominance of the fighting instinct seems to throw into the shade even the supposed primary appetite towards self-preservation; and the latent tendency towards happiness which, as evolutionists are good enough to assume, governs the course of human progress in history stands only second as a conscious principle to the terrible instinct of antagonism. Conflict or antagonism is what is called in certain circles a law. It is true that self-sacrifice is also called a law. But trifles like these which suggest at least two legislations—two planes of human life—need not detain us. Sufficient be it to know that Evolution (the modern word for what old-fashioned people call Nature or God) equipped her organisms for the needs of their selfish life with a boundless stock of antagonistic spirit.

It is a mild way of describing the state of affairs which would arise in these circumstances to say that it was a period in which there was "no family-cohesion". Yet it may be doubted if our author means to be seriously taken at his word. Such "cohesion" in some degree or other can never have been absent altogether; but it may be that its early effects were fitful, vague and transient. There was a little altruism—a little respect for the rights of others—in the world; but its security could not be counted on. Antagonism, thus unchecked by fear, would not allow the seeds of right to grow: it was destructive of all justice and beneficence. Its action, so long as thus misdirected, was a curse to man, and the moralised world remained only the dream of a few enthusiasts, who, sometimes daring boldly to be altruistic before it 'paid,' fell victims to the toils of rival selfishness.

The problem, then, is to bind the demon of antagonism, not to destroy him, but by judicious manipulations to convert him from the foe into the friend of man, to transform antagonism to emulation in the service of love. The germ of morality in the family-relationships—frail and fleeting as they were—had to be developed; and "when evolution tended to the formation and consolidation of families, civilisation and morality were assured". What, then, led to the formation of that social organism, which our essayist, with strange oblivion of certain animal societary forms, pronounces an anomaly? For in the formation of a community wielded by one authority—what Mr. Taylor calls a "nation," and what many have lately learned to call a 'State'—lies the secret. Antagonism, which unchecked is a curse, is turned into a comparative blessing by nationalising it. National

war is the safety-valve by which the superfluous energies of antagonism are turned off so as to leave the instincts of right room to develop inside the limits of the nation. Hostility thus turned off on other nations, the law of antagonism, we are told, so changed its form as to reverse its original effects. It is difficult to attach any meaning to the literal phrase; but it is probably a paradoxical way of announcing that when the temptation to selfishness was removed, when violent egoism was no longer allowed free play, then other "instincts" wrought out the good work of justice and undid the mischief of the pure spirit of hatred. With the institution of a single control, individuals were able to look at each other with indifference.

Thus the warrior and the conqueror are helps to the moral progress of the world. Indirectly, because they concentrate in their military mission the bad blood of rivalry which used to burst out everywhere, and leave others, freed from the feverish taint, to pursue higher and in especial moral ends. Directly, because the spirit of conquest and warlike efficiency communicates a sympathetic stimulus to all ranges of activity in the nation; the conquering spirit is not alien to the progressive; and a strong national self-consciousness is a condition of individual greatness. It is in such a community under political sovereignty that right can exist: only as constituted by the relations established between the members of it does morality have a local habitation and substantial being. Whether any further developments of morality and right are possible will appear in the sequel.

But how is such a consummation brought about? What, in short, is the relation of morality to force? for that is the question which moral science has to solve: How does might stand to right? On the priority of force Mr. Taylor has no doubts whatever. He has already given expression to his belief that the family affords no sufficient basis for the political control principle: unless we suppose that on rare occasions the family is obliged to close its ranks in the serried phalanx which befits war against other families. He is no less contemptuous of the theory of Maine, that law is in large part the growth of peaceful and spontaneous custom—the work of a community gradually finding out the conditions of social stratification. Indeed, on his original assumption of atomic human beings, destitute of the least patch of social glue, it is impossible that any other source of social unification can be adduced than the casual preponderance of some one man. The origin of unity, national or political (the two terms are interchangeable), is violence—force. Custom, peacefully developed, is a spurious procedure, of which the right-minded evolutionist is ashamed: he prefers a sudden and erratic invasion. Changes in social condition are the result of accident; and up rises controlling power. It was but a chance that man spoke—he might never have used his vocal chords; it was a chance that

he became moral, for he was so seamed by selfishness; and it was an accident that made him the 'political animal'.

Mr. Taylor describes at some length the main features of the reign of force. At first it stood in all the nakedness of violent might. *Im Anfang war die That*—the deed of violent usurpation. Without it the bondless multitude would vegetate on in aimlessness,—eating, drinking and multiplying: with it came the lightning-flash which cleared the air and brought fertilisation of mind and manners. Is it necessary to say that such a theory is fantastic? The annals of early—and of all—ages show, it is true, painfully conspicuous the disturbing action of brute force, but they do not show it alone and solely operative. The picture of the Romans as the human bull-dogs of the Mediterranean is overdrawn. The Roman conquest is not one long roll of unjust aggressions. Rather in national wars, as in pettier struggles, right and wrong are mysteriously mixed up; and though the reason alleged by diplomacy may often be fiction, that may only be because feeling feels its way through the meshes of motives which reflection is too slow to analyse. So much for the somewhat fancifully told story of Carneades (p. 59). Indeed, Mr. Taylor is himself aware that some form of what he calls "moral survival" is indispensable in every society. In other words, no society, however rude or violent, could exist if its members flourished merely because of their physical and intellectual adaptation to their medium. In some measure it must answer to serve the general interest: self-abnegation must be found beneficial by those who practise it. And the first controller of wild wills was not a mere soldier of force and skill; he was also, in however small degree, the minister and organ of the common good.

But Mr. Taylor, omitting this element, proceeds in Carlylesque mood to note the natural pride in the power of the mighty which the multitude feel toward their conquerors, and the hero-worship which greets successful usurpation, at least in the second generation. An easy descent of imagination turns the rule of force into the authority of hereditary right: it even goes a step further, and attributes to the sovereign a charter of power from heaven. Thus force is gradually covered over by the decorative hand of imagination, and sovereign might is converted into kingly right,—just as filial reverence for the commands of parents is the real historic source out of which has come the ideal sense of duty. And with regard to all such genealogies, let the *ex nihilo nihil fit* be remembered: science knows of no development save of the germ into the full-grown organism, and no variations save variations within a species. If there is no right in the first might, no lapse of time will ever confer it, though it may modify and complicate its actual organisation. Political power is ever a social, not an individual, fact, even in its origin: it was the perception of this truth which found expression (unfortunately ambiguous) in the theory of Social Contract.

Mr. Taylor sees that force does not originate, but only consolidate, exhibit, demonstrate morality, making it a palpable and real fact. So, too, he should see that law is more than the mere creation of a political control—more than a mere act of repression. It may not be without some justification that he protests against the idea, which seems to lurk in some heads, that customary law springs up in some mystical mode of growth from a collective body. Quite true that all initiative must be individual. But it need not on that account be merely violent. Rather in the alliance between force and right (neither being in this world at any stage quite absolute) force in each age cannot create law, but can only enforce it. And instead of describing law as "an artificial device for securing a uniform rate of moral progress" (p. 192) in a progressive state, whereas in the beginning of social concentration it was only the command of an "arbitrary power evoked and sustained by the blind forces of evolution" (p. 197), it seems truer to say that law is never so artificial as it is represented in the one passage, nor so casual as in the other; but rather that, like all human affairs, it exhibits a growing tendency to reasonable consistency from a point which is no mere zero of intellect to a terminus which is equally ideal. We know nothing of a man who was the hopeless sport of natural or 'evolutionary' freak; nothing of a man who is nature's and evolution's absolute master.

We have not space to follow Mr. Taylor's treatment of the question of justice. Like many writers before him, he is puzzled by the apparently fluctuating nature of the conception—by the contrast between the inner and the outward, the form and matter, the letter and the spirit of justice. Perhaps a little reflection will show that there is a like distinction of shell and kernel in other aspects of virtue. The old question, 'Is virtue one or many?' returns in new shapes, and the distinction between legality and morality is more convenient than fully defensible. But it is no doubt possible to trace some progress in the action of the community as it becomes more and more organised. The writer of the Fifth Book of the *Nicomachean Ethics* distinguished between the mechanism of society for the purpose of deciding disputes (the method of proportionate equality) and the disposition or character which aims at avoiding all conduct that can cause dispute; and Mr. Taylor imitates him. What he might have perhaps pointed out more clearly is the progress of morality which consists, as Plato noted, in its growing inwardness—in its discovery that its true imperative reads (as Mr. Stephen says) not 'Do this' or 'Refrain from that,' but 'Be thus'. It is however fair to add that Mr. Taylor does give a few words to the higher stage of morality when the individual is not a mere mouthpiece of the social fabric (probably he is never quite so low as that), but is himself an adequate embodiment of the universal principles of sociality.

Within the shelter of the political unity the family is for the

first time enabled to pursue its proper functions without being disturbed by extraneous work, and it comes to be, not (as the essayist represents it) a standard to test morality in general, but the first, nearest and most permanent combination in which antagonism is partially transmuted. But equally within the State other associations (Mr. Taylor's "combinations"—he seems to use "association" for aggregation) become formed and other aims are pursued. Economic immorality repeats on a gigantic scale the same unrestrained self-seeking as prevailed in the pre-association stage: political parties fly each at the other's throat, and rich and poor stand suspicious and suspected on different sides of a great gulf. Within the State, in short, combination is not very moralising: it seeks its own good, and cares little about others: the only hope of reformation is in individual agency. The State, in short, has only given us a home to live a moral life in, and to the individual the mandate rings out—*Spartam nactus, hanc orna.*

So with the question of international morality—the morality from nation to nation. The nation as such is brutally immoral. Nor is there much hope or cheer in the prospect of a federation of nations, even if there were any signs of its coming, and not rather a crowd of portents indicative of the creation of new nationalities more essentially antagonistic than the old. The hope here, too, lies in the transformation of the individual into a being whose cosmic sympathies respond more than ever to the touch of human nature, as well as to the nearer body of nationality—into a complete manhood, self-centred because ruled not by the attractions of a petty clique or isolated aim but by the better-learnt and better-loved interests of humanity.

But *Das Ewig-Weibliche zieht uns hinan.* A high place in the evolution of the moral world is assigned by Mr. Taylor to Woman. It was genius that first grasped the dim outlines of the great moral law, and genius that invented the machinery for realising them. But, while genius has only its day, and then is over, Woman ministers for ever at the shrine of goodness and righteousness by that spirit of love which is the ultimate dynamic of right conduct. It would be ungracious to analyse these enthusiasms: and to inquire into the place of *woman* in the redemption of the world from force and fraud is a task which no *man* can pursue with an unbiassed or particularly well-informed mind.

Next time we meet Mr. Taylor, we hope he may have widened his acquaintance with modern systems of thought, which will give a clearer perspective to his ideas. He might also devote a little more effort to the lucid expression of them.

W. Wallace.

Hegel's Philosophy of the State and of History. An Exposition by GEORGE S. MORRIS, Professor of Philosophy in the University of Michigan. ("Griggs's Philosophical Classics.") Chicago: S. C. Griggs & Co., 1887. Pp. xiii., 306.

Why is it so difficult to get hold of American books in England? Is there any causal connexion between this difficulty and the too great facility with which English books have been reproduced in America? However that may be, "English readers and students" in old England suffer from a disadvantage as well as American writers. This series of "Philosophical Classics," edited by Prof. Geo. S. Morris of Michigan, published in the enterprising city of Chicago, and neatly printed in the more venerable and classic precincts of Cambridge (Mass.), deserves to be much better known, than it has hitherto been, to students of German philosophy on this side of the Atlantic. The plan of the series is different from that of the well-known volumes edited by Prof. Knight, which are gradually furnishing us with a convenient Dictionary of Great Philosophers. The American series is "devoted to a critical exposition of the masterpieces of German thought": its aim is thus at once more limited and more uncompromisingly scientific. Only German works are treated. No space is given to biographical and but little to bibliographical details. The exposition of the works taken in hand is full and minute. There is less to attract the general reader; but the student, especially if he intends to grapple with the originals afterwards, will find in these volumes welcome and profitable aid. The volumes previously published have all been noticed briefly in MIND as they came to hand. They are *Kant's Critique of Pure Reason*, by the editor, Prof. G. S. Morris; *Schelling's Transcendental Idealism*, by Prof. J. Watson; *Hegel's Æsthetics*, by Prof. J. S. Kedney; *Fichte's Science of Knowledge*, by Prof. C. C. Everett; *Kant's Ethics*, by President Noah Porter.

Prof. Morris's new volume falls into two parts, 110 pages being devoted to an account of the *Philosophie des Rechts* and the remaining 196 pages to the *Philosophie der Geschichte*. "The limitations of space necessary to be observed have compelled the author to abstain mainly from comment or criticism, whether defensive or offensive, on the doctrines expounded." The few instances in which Prof. Morris has gone beyond an exposition which closely and carefully follows the original text, in order to give remarks of a more general elucidatory character, make us regret that we have not more of them. Hegel's *Phil. des Rechts* and *Phil. der Geschichte* do indeed belong to one another as much as do the analytic and historical portions of his *Æsthetik* and *Phil. der Religion;* and it is thus fitting that they should be treated in the same volume. Still the *Philosophy of History* is already accessible to English readers in a very good translation, and too little has been done for the exposition of the *Phil. des Rechts*, although so long ago as 1855 Mr. Sandars published his

admirably lucid and only too brief summary of it in the *Oxford Essays*. Thus it seems a pity that Prof. Morris did not sacrifice external consistency and completeness to the greater needs of students, and devote almost the whole of his volume to the *Phil. des Rechts*. The restrictions of space which he has imposed on himself lead to his exposition's being a little more severe in character than was perhaps expedient in view of still prevalent prejudices about Hegel. It is a pity to have given us so much of the solid pudding and left out so many of the plums—the wit and wisdom that are compressed into those brilliant sayings (we have to change the metaphor for one more worthy) that flash out, usually in the "*Zusätze*," to light up the obscurity of the original paragraph. Thus the fine passage (at the end of the Preface) about the owl of Minerva not setting forth till twilight, has not yet been too often quoted to bear repetition as a commentary on the *dictum* that "the task of philosophy is to comprehend that which *is*," not to construct ideals of what ought to be. Prof. Morris has kept in the "psychological valets" who cannot understand heroes, but has not given us the subsequent sentence: "The laurels of mere wishing are dead leaves that have never been green" (*Phil. des Rechts*, p. 163); nor this (p. 165): "When St. Crispin steals leather to make shoes for the poor, the act is moral (*moralisch*) and wrong (*unrechtlich*)"—a remark which explains Hegel's use of "*moralisch*" better than much commentary. Again, how admirably do the uncared-for Greek and Egyptian works of art in Turkish possession (p. 101) illustrate the significance of the element of *use* in the conception of property. To overlook Hegel's perpetual struggle after concreteness and his keen eye for the actual and real is not only to risk misapprehension on the part of unsympathetic readers, but is to lose perhaps the chief lesson he has to teach all subsequent philosophy—the need of always making facts our own by thinking them, and of always testing our thinking by facts. He had, if I may borrow a phrase from a schoolboy's essay, a habit of "inhaling solid facts".

Still, the work as we have it is so excellently done that we have hardly the right to complain: and many readers will prefer the book because of the very brevity of its exposition. In his introductory remarks (p. 4) Prof. Morris calls attention to the way in which Hegel works backwards. This is probably the chief difficulty of the *Phil. des Rechts* and, it might be added, the main objection to be made to its method. For us in this country it is especially important to have Law, Morality and the State treated in their connexion, instead of according to the customary severance of Jurisprudence, Ethics and Politics. But does not the feeling force itself on one that the historical order is better for exposition also, and that it is more profitable to show how morality and law rise out of the State or society, than to adopt the perplexing logical order which begins with abstractions that

only receive their explanation, their vindication and their correction afterwards?

The charge commonly made against the *Phil. des Rechts*, that it tends to support an unreasoning and intolerant reactionary conservatism, is, after all, an unfair one. So far as the letter of the book goes, and so far as Hegel's own personal preferences are concerned, this charge may be true. But the spirit of his type of political philosophy is widely different. The exposition of philosophy or of the structure of society *as if* it were completed must not be taken to mean that the philosopher holds it to be actually completed. In the *Phil. des Rechts*, § 216 (p. 574), Hegel protests against the mistaken demand for finality or completeness in a legal code or a philosophical system, a demand which is often made the excuse for doing nothing at all. Put together Hegel's resuscitation of the Hellenic conception of the State with his declaration in the *Philosophy of History*, that the end of the modern State is to realise the positive freedom of *all*, and it becomes obvious enough that, though the advocate of *laisser faire* will not relish Hegel's politics, he will have more reason to blame him for (unconsciously it may be) begetting socialism than for supporting the old *régime*. The constitution of the United States with its attempted consecration of contracts is probably more alien to Hegel's conception of the State than almost any other. Thus it is strange to find Prof. Morris patriotically trying to find Hegel's ideal state in America (p. 92 n.). Undoubtedly the "three orders of powers" are to be found there, more easily than anywhere else, just because they have been formally placed there; but does not the very fact that the President "enjoys more real power than any constitutional monarch in the world," as well as the fact that he is elected, remove him very far from Hegel's king, who has only to dot the *i*'s (*Phil. des Rechts*, § 280, p. 365), and whose succession is to depend on the "groundless" accident of birth? Whether it is a matter to be proud of or not, there can be no doubt that Hegel's ideal state was to be found in the British constitution, as he knew it, with an unreformed Parliament—and this in spite of his scoffing at it in the end of the *Philosophy of History* as "a mere complex of particular rights". As Mr. Sandars says (*Oxford Essays* for 1855, p. 215): "The picture given of what a State must be, according to the necessities of man's nature, and the exigencies of his position on this earth, is nothing else than a closely copied sketch of the British constitution".

In many places Prof. Morris gives considerable passages in translation, and his analysis serves the purpose of an abbreviated version. He has grappled successfully with the difficulty of finding English equivalents for the German terms. Here and there the German terms are inserted in brackets, a practice that might with advantage have been extended further. "Ethical," as opposed to "moral," is used as the rendering of *sittlich*.

This, though not free from objection, is certainly better than Mr. Sandars's "rightful," as it can be defended by going back, not to *τὰ ἠθικά*, but to *ἦθος* and *ἔθος*; but it seems impossible to get any single English term to express the distinction. There is a useful note on the word "*Recht*" on page 12.

To note two small misprints:—on page 113 n., "Hegel's" should be in italics, as part of the title of a book which is not Hegel's; on page 219, line 22, for "inured" should obviously be read "issued". In the sentence translated on page 280, the "and" before "which" is hardly quite correct.

D. G. Ritchie.

Grundzüge der physiologischen Psychologie. Von Wilhelm Wundt, Professor an der Universität zu Leipzig. Dritte umgearbeitete Auflage. 2 Bände. Leipzig: W. Engelmann, 1887. Pp. xii., 544; x., 562.

The amount and range of Prof. Wundt's work are scarcely less noteworthy than is its value. Some readers of Mind may not know that he has written standard books on physiology and physics, but all must have noticed the extent of his philosophical writings. Since the publication of the second edition of the *Physiologische Psychologie* in 1880, Mind has recorded the completion of the *Logik* (ix. 158), a volume of *Essays* (xi. 132), the *Ethik* (xii. 285), a *Streitschrift* (xii. 478), and the constant issue of the *Philosophische Studien*, to which the editor is also the most frequent contributor. Now we have a new edition of the *Physiologische Psychologie*. We may look on this as Prof. Wundt's master-work, for it is his psychological thought that pervades and brings into unity the whole of his philosophical and physical writings. Those acquainted with the author's careful methods will not be surprised to find that this third edition is in many respects a new book. The work has been throughout revised, and to a large extent rewritten, its size having been increased by 145 pages. The general plan and arrangement, however, remain as in the preceding edition.

Mr. Sully contributed to the first number of Mind an article on "Physiological Psychology in Germany," concerned chiefly with the first edition of Prof. Wundt's work, and Mr. Ward noticed briefly (vi. 445) the appearance of the second edition. The importance of the book, however, is such that I shall give some account of its general contents, as well as a notice of the matter which is new in this edition.

Prof. Wundt treats in his Introduction (i. 1-20) of the aim and scope of physiological psychology, and certain psychological data. Much of what he writes has become a matter of course, but this is largely due to the author himself. New sciences are not born full-armed from a single brain, but we owe to

Prof. Wundt the shaping of physiological psychology, and its acceptance by students both of physiology and psychology. The most interesting change in the Introduction is the addition of several paragraphs defining subjective and objective psychology, and subdividing the latter into physiological and social psychology (Völkerpsychologie). A work on social psychology is foreshadowed, which will follow the lines here traced, and treat of language, myth and custom.

Half of the first volume is given to a careful account of the nervous system and its relation to mind. Prof. Wundt, like Lotze, had the training of a physiologist and physician; but while in Lotze a mechanical natural science seems at times in conflict with an ideal philosophy, with Prof. Wundt physiology and psychology go hand in hand, mutually helpful. Thus this first section is not a mere anatomy and physiology of the sense-organs, nerves and brain, but a thorough study of "The Physical Basis of Mental Life". The psychologist cannot ignore the relation of consciousness to the material world; it is the point at which empirical psychology begins, and the question with which speculative psychology ends. The theories concerning the development of species and the conservation of energy are scarcely less important for mental than for physical science. Prof. Wundt begins at the beginning, treating in his first chapter the range of consciousness and the differentiation of its physical basis. He does not minimise the difficulty of inferring mental life from physical movement, a difficulty so great that the hylozoist can attribute consciousness to the falling stone, while Descartes denied it to even the highest brutes. But it is argued as highly probable, from the standpoint of observation, that consciousness is co-extensive with life; and as physiology assumes the phenomena of life to be based on the universal properties of matter, so psychology attributes to the matter which we perceive an inner being from which the individual consciousness is developed. This view, resembling Clifford's mind-stuff theory (MIND iii. 57), is neither materialism nor hylozoism; it does not make mind a function of matter, nor does it identify the latent life of dead matter with actual life and consciousness.

Prof. Wundt next devotes two chapters to the structural elements and development of the nervous system, including a full account of the anatomy of the human brain. The following chapter, on "The Course of the Nerve-Fibres," takes up 84 pages, and is the most thorough discussion of the subject with which I am acquainted: it will, however, be found hard reading by those who have not done practical work with scalpel and microscope. Another long chapter (pp. 66), no less complete than the preceding, is given to "The Physiological Functions of the Spinal Cord and Brain". The most recent researches of Ferrier, Hitzig, Goltz, Christiani, Luciani, Munk and Meynert are reviewed, and the conflicting evidence concerning localisation in the brain is sifted,

a position between that of Flourens and Munk being maintained. In this chapter Prof. Wundt seeks to find a physiological basis for the mental activity which he calls Apperception, and supposes the frontal convolutions to be the "organ of apperception". The argument is, however, given a less prominent place in this than in the preceding editions, the scheme of an apperceptive hierarchy being put in small type. The sixth and last chapter of this section treats of "The Physiological Mechanics of Nerve-Substance". Prof. Wundt gives unwavering allegiance to the law of the conservation of energy and its application to the living organism. From this vantage-ground he studies the course of the nervous impulse and the nature of innervation, making use of his own researches in his work *Die Mechanik der Nerven*. There is complete analogy between the storing-up and release of energy, which are the fundamental functions of the nervous system, and perception and volition, which are the fundamental functions of consciousness.

The second section (i. 289-544) treats of "Sensation". The first chapter (seventh of the book) is named "The Origin and General Properties of Sensation," and is concerned with the physical stimulus, and more especially with the development, structure and function of the sense-organs. In the next chapter, on "Intensity of Sensation," Prof. Wundt gives an independent mathematical derivation of Fechner's formula, but distinguishes, as Fechner does not, between "equal increase or decrease in quantity of sensation" and "least noticeable change in sensation". He favours a psychological interpretation of the law, but thinks this is not inconsistent with a physiological import. This chapter (as also that dealing with the Time-relations of mental phenomena) is much enlarged in this edition by accounts of experiments made during the past eight years in the Leipsic laboratory. As I have recently (MIND No. 49) described these, I shall not attempt to notice them here. Following the chapter on intensity of sensation is one on "Quality of Sensation," which treats in succession of touch, temperature, sense of effort, organic sensation, taste, smell, hearing and sight. No very great alterations are made from the preceding edition, but in all cases the most recent work is incorporated; for example, the researches on the temperature-sense and the Neurological Society's discussion on the muscular sense. The last chapter of the section, on "The Emotional Tone of Sensation," gives feeling its due place, beside intensity and quality, as a necessary element of sensation. Prof. Wundt ably discusses the relation of the emotional side of sensation to its intensity and quality, and to the total content of consciousness, but does not separate pure feelings of pleasure and pain from cognitive elements as sharply as Mr. Ward.

The third section (ii. 1-244) is on "The Formation of Presentations": treating of the development of perception through touch, hearing and sight, and the part played by each in giving us our

idea of space and the external world. The section is throughout carefully revised, the chapter on "Hearing" being entirely rewritten. The limits of this notice make it impossible for me to give an account of Prof. Wundt's views either on special matters, such as binocular vision and local signs, or on general theory. He published his first work *Die Theorie der Sinneswahrnehmung* as long ago as 1862, and his doctrine is surely worthy of more respect than Prof. James (MIND xii. 543 ff.) pays it.

The fourth section (ii. 225-462), on "Consciousness and the Train of Ideas," is one of great importance. As the preface tells us, Prof. Wundt has been engaged in experimenting on the time-relations of mental phenomena ever since 1860. This section gives a complete description of such experiments and of the light they throw on consciousness and attention. We are thus brought to the theory of Apperception, which has recently been attracting notice. The word was introduced into philosophy by Leibniz to denote a spontaneous activity of the mind through which presentations are clearly distinguished. Use was made of the word by Kant and by Herbart, and Prof. Wundt gives it a prominent place in his psychology. According to him, will is inseparably bound up with consciousness; it is activity of the mind, as necessary for perception as for movement. This activity of the mind is called Apperception (attention) when it is directed to perception and the train of ideas, and Volition when it is directed to movements of the body. Apperception is the more fundamental of the two: we must have the idea of a movement before we can carry it out. The will is determined by feelings of pleasure and pain, but it is the centre to which all motives converge and from which all thought and action proceed. In apperception *our* will is concerned with *our* ideas, whence we perceive the unity of will and get the basis of self-consciousness.

Following the chapters on consciousness and apperception is a chapter treating of "The Association of Ideas". Prof. Wundt distinguishes simultaneous from successive association, and discusses the part played by apperception. In this chapter memory, imagination and reason are briefly reviewed. There remain two chapters in this section, the one on "Emotion," the other on "Disturbances of Consciousness". In the former, passion and desire, the temperaments and the intellectual emotions, are acutely discussed; in the latter, hallucinations, dreaming, hypnotism and insanity are treated as far as seems advisable in a work on general psychology.

The fifth section (ii. 463-530), on "Will and Volitional Movement," contains three chapters: the first on the development of the will; the second on automatic, reflex, instinctive and voluntary movement; and the third on language. These chapters are not materially changed in this edition; they contain much that is worth careful study, but I am not able here to call attention to special matters.

The sixth and last section of the work (ii. 531-54) treats of metaphysical theories concerning the nature of mind, and the points of view from which consciousness can be studied. It is reprinted with scarcely the change of a word from the second edition. The few changes made in this edition in the more theoretical parts, and the sweeping changes necessary in the parts dealing with matters of fact, may lead some to praise the stability of reason, others to rejoice in the progress of science. Prof. Wundt comes to the final conclusion that "what we call mind is the inner being of the same unity which outwardly we look upon as the body belonging to it". But, he goes on, "mental being is the reality of things, and its most essential property is development. The human consciousness is for us the summit of this development; it is the point in the course of nature at which the world comes to reflect on itself. Not as a simple being, but as the developed product of countless elements, the mind of man is what Leibniz called it, a mirror of the world."

It is much to be hoped that an English translation of the book may now be made. Even those who know some German will find the original difficult reading, and the French translation, begun from the proof-sheets of the second edition but published scarcely more than two years ago, is already obsolete. The difficulties in the way of publishing such a translation remind us of the extent to which science is handicapped in England by the methods of publication. All important English books on scientific subjects are translated into French and German, and a new edition of a work such as the one before us, extending to more than 1100 large octavo pages and containing 210 woodcuts, can in Germany be admirably printed and sold for 18s. Our only chance of having an English version of the *Physiologische Psychologie* would seem to be through the co-operation of the Clarendon or the Pitt Press, and this might well be granted in the case of one of the great scientific monuments of these days.

J. McK. Cattell.

Gemeinschaft und Gesellschaft, Abhandlung des Communismus u. des Socialismus als empirischer Culturformen. Von Ferdinand Tönnies. Leipzig: Fues's Verlag (R. Reisland). Pp. xxx., 294.

This book is in its first intention a study in economics. But since the bourgeois economy of modern times must, in order to be fully understood, be presented in its connexion with and contrast to earlier historic forms of man's life amongst his fellows, the writer necessarily passes beyond purely politico-economic investigation to an analysis of the general social problem. He finds his clue to the solution of this in the psycho-

logical facts of human, and more generally of all organic, nature. And he guides us with equal breadth of view and mastery of detail through the disorderly mass of social phenomena.

Community as opposed to Society, the real and organic as opposed to the ideal and mechanical, the natural as opposed to the artificial—this is the antithesis on which the theory before us is built up. Men have part and lot one in another. They are knit one to another through bonds of blood, through a common dwelling-place and common tilth, or in a mystical union of spirit. Kinsman is bound to kinsman, neighbour to neighbour, friend to friend. In household, village-commune and city-state alike, no man lives to himself and none dies to himself. From the deepest human relation of child to mother, and secondarily from that of child to father, to brothers and sisters, or to kinsmen generally, the organic solidarity of primitive human groups arises. From the household, which is as it were the organic cell of communal life (p. 30), community of existence spreads in widening circles, and we get, perhaps, masters and lords, and prentices and servants, but still in organic connexion with one another. Lordship arises as much from augmented duties and rights as from the diminution of these duties and rights (p. 22), and it long remains relative, communal and shared, or finally representative. Again, with the more complex developments of the commune exchange arises, and in particular that between town and country (p. 34); but this, too, remains communistic, and no man is a self-seeker as dealer, merchant or usurer. And the happy commune is perfected by arts as well industrial as æsthetic, resting equally, as Goethe says, on a kind of religious sense (p. 43), and finally by religion itself.

How, then, do profit-making and usury and landlordism enter this happy Eden? Simply because the individual unnaturally separates himself and his interests through thought from that whole to which he really belongs. He looks to his own ends, and to these only, and will only give in order to receive. The lord unrighteously asserts absolute, individual and exclusive property in the land (p. 38). The dealer acts no longer as trustee merely in exchange, but for his own hand (p. 68). The merchant appears who is not necessarily the citizen of any land (p. 62); and with the invention of Money, which represents the abstract notion of value (p. 52), or which is the potentiality of all commodities (p. 211), every man becomes a merchant (p. 60). A Credit-system makes usury possible. He who possesses money appropriates the surplus-value supplied by labour which hunger forces to sell itself for bread (p. 71). The drones live on the labour-class, which is at best half-free (p. 95). Convention and contract supersede custom and status, and the reign of competing capital begins.

In this account of the social system, which the Romans evolved in the old world, and which has generally obtained in modern

times, Herr Tönnies is greatly influenced, as he confesses, by Rodbertus and by Marx (p. xxviii.); and since he attaches chief importance to this side of his theory (*ib.*), the relation of his economics to these teachers calls for some remark. First, then, he accepts the position that "the necessary minimum for the maintenance of life and proper consumption during the time over which a man's labour is to extend" (p. 86) is the limit of the law of wages, and a limit which we tend actually to reach. To this, of course, it is to be objected that the attainment of this limit would be suicidal for capitalism, which needs for the permanence of the existing system the reproduction of at least the present amount of labour-power; *i.e.*, the unit in determining wages is, as Ricardo showed, not the individual but the family. Our author, however, would not shrink from the paradox of attributing suicidal leanings to the bourgeois system; in introducing, for example, the notion of permanent obligation—which is yet in the world of facts not possible—"a perpetual bond is constituted in contradiction to the whole notion of Society, a bond, too, which does not bind things only but persons: the relation which in simple exchange-transactions is momentary, becomes conceived as unlimited in time" (p. 58); or, again, in placing the wages-labourer, who if he is to be the subject of contract must be free, in virtual slavery, a paradox which issues in the class-wars of great cities and the fall of bourgeois culture. And so the objection misses fire. Secondly, however, he adopts, though in a modified and quasi-metaphorical sense, the dogma that "labour is the source of all wealth," and also, for determining value, though only ideally so, the conception of "average socially necessary labour-time" (p. 87), of which he notwithstanding says, that it is only a true criterion where nature-powers have no exchange-value, and where and when men co-operate perfectly with one another and with machinery! Thirdly, he uses the famous doctrine of his two predecessors concerning surplus-value (*Mehrwerth*), "the difference between the price at which labour-power is bought in, and that at which not its product but its exchange-value as involved in the product is sold" (p. 90); and here it might be objected that his position in this regard is not consistent with the statement that "it is self-evident that thing *a* for person B may be better than thing *b*, and yet thing *b* for person A better than thing *a*" (p. 47); an admission, however, which he renders nugatory by his doctrine of objective value. Lastly, his more general attacks on the merchant and the profit-monger, which are based on Marx, lose some of their cogency from the fact that (p. 68) he mentions and fails to rebut the claim of the former to pose as the "organ of importation or supply," and from the fact that he at least recognises interest (p. 67) in the cases of *lucrum cessans* and *damnum emergens*, and specifically (p. 57) as something "to which a man has a just claim if the return of the capital has not been promised for a

definite date"; in which case, however, he perhaps might intend the interest to be treated as an instalment of the debt, a view which, it must be admitted, fits in very well with what immediately follows concerning permanent obligations.

It is rather, then, in respect of the general spirit than on account of the letter of his criticism of Capitalism that Herr Tönnies has our sympathy and carries us away with him. And the spirit of his criticism leads us directly to its basis in his psychology, which is expounded as "*Wesenwille u. Willkür*".

Wesenwille, or the true and essential real communal will, involves thought; but *Willkür*, or the factitious and arbitrary selfish will, is thought or thought's creation. The one is universal nisus. The other is individual volition. The one is connected closely with organic nature. The other is mechanically thought. On *Wesenwille* grows Community. On *Willkür* is built up Society.

Wesenwille expresses itself in reference to the vegetal life as *Gefallen*, or the affirmation of the principles of life; in relation to the animal life, as Habit; as a form of mental life, as Memory (*Gedächtniss*). The three forms are closely bound up together, and from the last develops Conscience (*Gewissen*) and Morality, but apparently also the whole self-willed individualist nature (*Willkür*), which, disengaging itself from the communal will, observes prudence in sacrificing the less for the more profitable, looks for adequate means to its own ends, posits and systematises its own particular ends, and is at war with folly, as the true will is with evil (p. 129).

The triads in the development of the psychological antithesis are somewhat artificial, and many of the distinctions drawn seem over-subtle. And the central element in the psychological scheme (*Gedächtniss*) appears too vague for its position. Why is Speech said (p. 113) to be "the generic expression of the mental life," of which dumb thought is only a form? And if *Gedächtniss* only comes to full development, or even to development at all, with speech—'God gave man speech and speech created thought'—can it be memory merely of the traces left by modification of the organism (p. xix.)? Apparently it is something more. Habit is made to do all that unconscious memory does in the theories of Hering and S. Butler for the evolution of animal instinct (p. 112), while "Memory" is rather that imagination or fancy (p. 117) which appears as genius, or it is a sense of duty (p. 141) whose true treasure is to know the just and good in order to love and do it (p. 113); and Conscience too is somehow a form of "Memory," which arises in the relation of man to man (p. 121). Is this sufficiently lucid to justify so definitely articulated a superstructure of social theory?

Nevertheless, Herr Tönnies is not open to some of the objections which one might be inclined to pour forth upon him. He does not (p. xix.) believe in the evolution of the moral from the

immoral. Morality, indeed, becomes explicit through the development of particular feelings and habits, but it is in the germ in the original organic unity. Why do I feel *Gefallen* and not rather *Missfallen?* Because there is a real organic natural fitness. And on like lines habits are formed in one direction rather than another, and memory takes up this and leaves that. What I evolve is involved in the germ. And if morality be already there, then "Memory" might well also be sense of duty. *Wesenwille* keeps men together, knit in the bonds of fellowship, supplying each the other's moral as well as physical needs. The arbitrary or factitious will, on the other hand, separates men and supplies for each his own material wants. Herein, then, our author inverts Schopenhauer, as he has already inverted Hobbes and Spencer. He affirms the world as will; denies it as idea.

In a discussion of will there arises always the problem of freedom. And the solution of this book would seem to be that "in the sphere of the true will there is no alternative; possibility implies actuality" (p. 147). "All Can involves a real Must" (p. 148); *i.e.*, the true will is determined but autonomous. Conversely, the factitious will is indeterminate but heteronomous, not therefore free, but rather froward. A difficulty, however, then arises, which I think is not here solved, with regard to the possibility of the free will's extricating or disengaging itself from the determinate, and of raising its superstructure, or, to vary the metaphor, appearing as a pathological and parasitical fungus.

Women, children and the commonalty express true will. Men, adults and the cultured few, factitious freedom, which culminates in science and cosmopolitan opinion. A young woman who acts from feeling and conscience, and with modesty, is the typical subject of will. An old man who calculates is the normal subject of *Willkür*. The lies of the market unsex woman; and the emancipation of women and children—with the result that "the family becomes an accidental form for the satisfaction of physical wants" (p. 191), and that monogamy, or the union of a whole life, becomes unessential (p. 245)—is the last evil of society.

Herr Tönnies applies his theory to natural law, and seems to establish the fact that *jus naturale* has more senses than one, according as its subject is an essential self which is part of a whole and a whole of parts, or a person factitious and accidental, *extra res* and *post rem*, but thought as an end "in and for itself" (p. 205). And he accordingly adopts Maine's view of the *jus gentium* and its place in the development of law and the doctrine of rights. Only so far, however, that when the State, a social arbitrary product, as this student of Hobbes maintains, is constituted, the State having sole power of distress itself interprets the natural right which is above it and should control it as a trustee, and allows no right against itself. Natural right in the sense of the personal rights of the abstract mortal is a product of society, which yet tends to substitute for it positive right; till in the

fulness of time the State shall abolish itself. Natural right in the communal sense is far other. The antitheses of contract-law and family-law, &c., are fully set forth in the third and last book of this essay.

We might be disposed to quarrel with the position that the State is artificial, but we find a *Gemein-wesen*, related to community as animal to plant (p. 255)! which answers all our purposes, and we can, therefore, afford to let the State go. Especially as this theory gives us the right to uphold the contract-theory of society with Hobbes, and yet to say with Maine that the commune is not made but grows. We may be dialectic with Hegel, evolutionist with Mr. Spencer, and Herr Tönnies can reconcile us all: "all science and therefore all philosophy as science is rationalistic; its objects are thought-constructions. But all philosophy and therefore science as philosophy is empirical" (p. xxiv.). When we quarrel we do not mean the same thing; when we agree we are of course right.

It is not, however, so much in the bright reconstruction of a social world on Spinozistic or Schopenhauerian lines, nor in the application of evolution and rationalism side by side, that the value of this book lies, but rather in what Herr Tönnies commends in Maine—"light-giving *aperçus*" (p. xxviii.). He is original, and thinks through a mass of tangled details honestly and sincerely, and if not convincing, the book is one which might yet elevate us almost to the level of that socialism which shall be.

HERBERT W. BLUNT.

VIII.—NEW BOOKS.

[*These Notes (by various hands) do not exclude Critical Notices later on.*]

Logic; or, the Morphology of Knowledge. By Bernard Bosanquet, formerly Fellow and Tutor of University College, Oxford. 2 Vols. Oxford: Clarendon Press. Pp. xvii., 398; viii., 240.

The conception of logical science, which has been the author's guide in this work, is, according to the preface, "that of an unprejudiced study of the forms of knowledge in their development, their interconnexion, and their comparative value as embodiments of truth". The first volume deals with Judgment, and consists in an attempt to trace the underlying identity of the judging function through such various forms as Measurement, Enumeration, Equation, Individual and Generic Judgment, Hypothetical and Disjunctive Judgment. It is the author's opinion that the relations of these forms to one another cannot be represented by a linear series, and he therefore represents the more abstract group of judgments (of which equation is the type) as branching off from the natural development and pursuing a parallel but independent course. The second volume deals in an analogous manner with the forms of Inference, treating of Enumerative Intuition, true Calculation, Analogy, Scientific Induction, and Concrete Systematic Inference. The concluding chapter discusses the formal and material postulates of Knowledge. Critical Notice will follow in due course.

Philo Judæus; or, the Jewish Alexandrian Philosophy in its Development and Completion. By James Drummond, LL.D., Principal of Manchester New College, London. 2 Vols. London: Williams & Norgate, 1888. Pp. viii., 359; 355.

Dr. Drummond's scholarly work is the result of special studies extending over a long period; the introduction on "Philo and the general principles of the Jewish-Alexandrian Philosophy" (vol. i., pp. 1-26) having been "published, substantially, in 1877, in the form of a College address," and much of the author's time since then having been given to the work. "My studies," the author says, "originated in the desire to learn at first hand what Philo thought, and why he thought it; and in order to guard, as far as possible, against every bias, I have considered it best, both in my own investigations and in giving the results to the public, to avoid all side issues, and make the discussion purely historical. But while one could only gain by setting aside, for the time, the bearing of Philo's teaching upon Christian dogma, it was impossible to understand it without tracing the previous streams of thought which met and mingled in the hospitable eclecticism of his philosophy. I have, therefore, prefixed to the book on Philo a sketch of those lines of Greek speculation which had the most influence on him, and some account of that development of Hebrew thought of which he is the most distinguished representative." Book i. ("Greek Philosophy," vol. i., pp. 27-129) consists of three chapters—(1) "Heraclitus," (2) "Anaxagoras to Aristotle" (Anaxagoras, Socrates, Plato, Aristotle), (3) "The Stoics," —and an appendix "on the question whether Heraclitus recognised a conscious intelligence in the universe". Book ii. ("Blending of Hellenism and Judaism till the time of Philo," pp. 131-255) has five chapters — (1) "Preparations for the doctrine of the Logos in the Old Testament,"

(2) "Ecclesiasticus," (3) "The Septuagint," (4) "Jewish-Alexandrian Literature; Sibylline Oracles," (5) "The Wisdom of Solomon,"—and two appendices, dealing with (1) the letter of Aristeas, (2) Aristobulus. The author discusses at length the question of the genuineness of the fragments of Aristobulus, and comes to the conclusion that, like the letter of the pseudo-Aristeas, they are forgeries. The exposition of the philosophy of Philo himself (bk. iii., vol. i., p. 257 to vol. ii., p. 324) falls under the following heads:—(1) "The Origin and Nature of Philosophy," (2) "The Universe and the Problems it suggests," (3) "Anthropology," (4) "The Existence and Nature of God," (5) "The Divine Powers," (6) "The Logos," (7) "The Higher Anthropology". The first three chapters are included in the first volume; the remaining four, together with three Indexes—(1) "Subjects and Names," (2) "References to Passages in Philo," (3) "Reference to Passages in the Old Testament cited by Philo,"—make up the second. The lines of Greek speculation which the author follows out are the Logos-doctrine started by Heraclitus, and the teleological theory started by Anaxagoras. These were "combined in the completest way" by the Stoics, who, with Plato, had most direct influence on Philo; but for the Stoics the Logos still remained, as it had been for Heraclitus, a material Logos; and again, the Stoical Pantheism was sharply distinguished from the Jewish doctrine of "the transcendent divine sovereignty". The problem of the Alexandrian philosophy—a problem already suggested by a "duality in religious experience"—was "to bring the transcendent God, whose essence was incognisable by the human mind, into the requisite relations with nature and man by the mediation of certain powers". To this end it employed Greek ideas, transforming them in the process. The "divine powers," conceived as a means of bringing the infinite into relation with the finite, were identified with the Platonic ideas, and thus a new turn was given to Platonism. In the conception of the Logos as the highest of the divine powers, the Heraclitean and Stoical notion of a "rational force" immanent in the universe was combined with the Platonic notion of a "most generic idea," and at the same time with the Hebrew notion of mediation between God and man. Here centre all the problems of the interpretation of Philo. With how much philosophical consistency has the reconciliation of the various elements in his "strangely-blended speculations" been carried out? According to the author, both Philo's speculative power and his consistency have usually been underrated by his expositors. When the unsystematic character of his writings, his taste for personification, and his use of the method of allegorical interpretation of Scripture are allowed for, there is seen to be no essential inconsistency or confusion, at least so far as the vital and central doctrines of his philosophy are concerned. In interpreting Philo, as in interpreting other philosophers, we ought, of course, to seek first a reconciliation of apparent inconsistencies, and "only in the last resort to admit that our author did not know his own thoughts, or was incapable of comparing them". This method of interpretation being adopted, not only is it seen that "the doctrine of intermediate powers or ideas, instead of being an artificial resource to reconcile discordant thoughts, grows out of the very roots of Philo's theology," but also the Logos-doctrine itself, where "the uncertainty arising from Philo's eclectic method reaches its highest pitch," is found to be no mere syncretism but an organic unity. The question whether Philo conceives the Logos as personal or impersonal is thus resolved:—"Philo avoided pantheism by his belief that God was transcendent above the Logos (just as the human mind, conceived as a complex unity, is above the powers that compose it). From the depths

of the divine personality flowed forth the rational energy which pervaded creation, and in this its universal form it had no personality distinct from that of God; but as it passed on and took possession of finite minds, personality once more appeared" (ii. 226). The "powers" are not only not conceived as personal, but are not to be regarded as ontologically distinct beings at all. "The Logos is not a demiurge who acts for or instead of God, but is God's own rational energy acting upon matter" (ii. 192-3). On its positive side, the doctrine is thus interpreted:—"All other things are an expression of Thought, but Thought is an expression of God alone" (ii. 189). The Logos and Wisdom, in the author's view, are ultimately identical (ii. 211). The Spirit (πνεῦμα) also "is ontologically the same as the Logos, though in its higher sense it is used of the Logos only in connexion with mankind" (ii. 217). Philo's doctrine of the human mind is characterised by the rejection of materialism. Some of his expressions, indeed, seem inconsistent with this; but if the mind is occasionally said to be of "ethereal" or (sometimes) of "fiery" nature, the inconsistency is only apparent. "Philo nowhere deliberately maintains the ethereal origin of the mind, in the strict sense of the words; and the most which can be justly alleged is that he two or three times allows himself, partly in deference to the opinion of others, partly from his figurative style of writing, to use language which might be misleading. On the other hand, his doctrine that the rational soul has for its substance the divine Spirit, which connects it inseparably with the Supreme Being, and removes it entirely from the category of matter, is asserted with a frequency and distinctness which leave nothing to be desired" (i. 335). His specially close dependence on the Greeks in his theory of matter, and of the world and its elements, is very well shown. The author concludes that Philo taught the eternity of matter, but did not regard matter as an "active principle of evil". The source of imperfection, according to Philo, is "not in the material as opposed to the spiritual, but in the phenomenal as opposed to the eternal" (i. 311). "It is not to matter in its essence, but to matter in its phenomenal and ever changing aspects, that Philo attributes any power of limiting the agency of God" (i. 312). An example of Dr. Drummond's method of interpretation that must at least be mentioned is his discussion of the doctrine of the divine attributes (ii. 23-8), where he shows special skill in bringing Philo's apparently discrepant statements into the unity of a general conception.

Aristotle and the Christian Church: An Essay by Brother Azarias, of the Brothers of the Christian Schools. London: Kegan Paul, Trench & Co., 1888. Pp. vii., 141.

Later on in the present No. some interesting information is given about the Aristotle of Jewish philosophy: this little book discourses of the philosopher's influence on early and mediæval Christianity. The author, of undisclosed nationality, writing from London but not exactly as an Englishman would write (were it only in the matter of metaphors), took up his subject, in the first instance, for behoof of the Concord (Mass.) School of Philosophy met in last year's summer session. If he has nothing particularly new to tell, even, as he specially professes, concerning the long struggle from the beginning of the 13th century before the condemned Aristotle obtained full ecclesiastical recognition, he has yet made diligent use of all the available authorities, and does not fail to render to "the English reader" such service as he had in view. Among the factors helping on Aristotle's influence, the work of the Arabs is not overlooked; on the other hand, the mediating work of the

Jews gets hardly any acknowledgment. The author's chief shortcoming is in historical perspective, as it is apt to be with writers on the long tale of centuries up to the 15th or thereby: it does not seem to be remembered that each of them included 100 years as much as those that followed, and if not (for a variety of reasons) as many possibilities in the way of human thinking, yet still a great many. When he passes, after his historic sketch, "to show the spirit in which the Schoolmen worked, and to prove that the philosophy evolved by them is as distinct from that of the Lyceum as Saint Peter's is from the Parthenon," the enthusiasm displayed continues to be more evident than the discrimination. The thesis, however, is essentially correct, as he thus goes on to express it in his preface: "Aristotle's influence is there; his terms and his formulæ are employed, but the inner spirit and the guiding principle are far different". The Cardinal-Archbishop of Westminster has read and recommends the essay; nay more, expresses himself thus on the subject of it:—"The supremacy of Aristotle in the intellectual world of nature and that of St. Thomas in the illumination of Faith, are the two great lights of natural and supernatural truth. From the time of St. Edmund, who brought the study of Aristotle from Paris to Oxford, the tradition of study at Oxford rested on Aristotle and Faith. Now it has wandered to the world of rationalism which Aristotle and St. Thomas purified." That is a deliverance standing in considerable need of explication.

Solomon Maimon: An Autobiography. Translated from the German, with Additions and Notes by J. Clark Murray, LL.D., F.R.S.C., Professor of Mental and Moral Philosophy, M'Gill College, Montreal. Paisley and London: Alexander Gardner, 1888. Pp. xv., 307.

This is an excellent translation of the most curious self-exposure ever made by philosophical thinker. Kuno Fischer, in passing from Kant to Fichte in vol. v. of his *Geschichte*, first drew full attention (cc. 6, 7, pp. 172-95, in the second edition) to Maimon's strange personal story as well as his exceptional importance among the early critics of the Critical Philosophy, and J. H. Witte followed in 1876 with a special monograph on the wayward Jew and his fitful work. The translating into English of so remarkable a record of human experience as the *Lebensgeschichte*, not unknown of late years to some in this country for all its rarity, ought not to have been left to the chance of Prof. Clark Murray's finding a copy on the shelves of a second-hand bookseller in a Canadian town; but he has performed the task with such skill and judgment that it is well it was so left. Omission is made of the chapters on Maimonides's *Guide of the Perplexed*, which certainly do nothing to help forward the narrative, and are now superseded for the English student by the access that Dr. Friedländer has given to the whole of that work; there is also, here and there, some judicious condensation. On the other hand, footnotes are inserted where elucidation of the text was desirable, and a graphic concluding chapter is added, bringing down the story to Maimon's death in 1800 (he was born about 1754), his own confessions having been published in 1792. For the materials of this chapter, as also for his useful footnotes, Prof. Clark Murray draws chiefly upon the volume of *Maimoniana* issued by S. J. Wolff in 1813. Maimon has a special interest for English thinkers, as Mr. Shadworth Hodgson, on his own part, took occasion to declare some years ago (in the preface to *The Philosophy of Reflection*): he had come markedly under the influence of Locke, so powerful in Germany throughout the 18th century, before bringing his singular acumen to bear upon Kant's work

of new construction in philosophy. The present volume reveals, with absolute unreserve, the extraordinary conditions of life—some of almost incredible squalor—amid which the ablest Jewish intellect since Spinoza got into play in conjunction with a character that could never let promise or purpose come to fit result.

The Philosophy of Kant, as contained in Extracts from his own Writings. Selected and Translated by JOHN WATSON, LL.D., Professor of Moral Philosophy in the University of Queen's College, Kingston, Canada. Glasgow: James Maclehose & Sons, 1888. Pp. x., 356.

The author of *Kant and his English Critics* was led some time ago, by his experience as an academic teacher, to try the method of working students up to the philosophical level with a careful selection of extracts from Kant's writings, instead of turning them loose at first into the jungle itself. It was a happy idea, as everyone with the like experience will be ready to acknowledge. Prof. Watson put his selection into print, and it has been used in other American Universities besides his own, but has apparently not been seen on this side of the ocean. The volume which he now publishes here, and which cannot fail soon to recommend itself to all concerned, is practically a new work. He has "gone carefully over the writings of Kant again, selecting and re-translating all the passages that seem to be essential to the understanding of his philosophy". These have been taken from the *Critique of Pure Reason* (pp. 1-222), the *Metaphysic of Morality* (pp. 225-58), the *Critique of Practical Reason* (pp. 261-303), the *Critique of Judgment* (pp. 307-49). A useful Index (pp. 351-6) completes the volume. In executing the work, Prof. Watson has fortified his own scholarship and judgment with those of Prof. E. Caird, who read the whole of the MS. and made "a number of valuable suggestions". The selection seems altogether good and satisfactory, though one may a little regret that nothing is given from the "Methodenlehre" which closes the *Critique of Pure Reason.* The omission—*e.g.*, in regard to so important a question as that of the function of Definition in Philosophy as compared with mathematical and with other science—is not made up by the "Appendix on Method" at the end of the *Critique of Judgment.* Nor might it have been amiss to make cross-references, at various places in the *Pure Reason*, to the doctrine of the *Prolegomena.*

ΠΛΑΤΩΝΟΣ ΤΙΜΑΙΟΣ: *The Timaeus of Plato.* Edited with Introduction and Notes by R. D. ARCHER-HIND, M.A., Fellow of Trinity College, Cambridge. London: Macmillan & Co., 1888. Pp. vii., 358.

This first English edition of perhaps the most difficult of all the Platonic dialogues, and certainly among the first in scientific and philosophical significance, gives parallel with the text an English translation that is intended to relieve the business of elucidation and comment, in detail, as carried on by footnotes; the general bearings of the dialogue are discussed in an Introduction (pp. 1-52). Attention has before been called in MIND xi. 353, on the subject of the *Phaedo*, to Mr. Archer-Hind's Platonic work. Critical Notice will follow of his second important achievement.

Introduction to the Study of Philosophy. By J. H. W. STUCKENBERG, D.D. New York: A. C. Armstrong & Son, 1888. Pp. x., 422.

This work by the author of *The Life of Immanuel Kant* (MIND vii. 603), who here writes from Berlin though he publishes in New York, deals,

for behoof of "students and others who desire to prepare themselves for philosophic pursuits," with a series of topics that have been much discussed in MIND :—Definition of Philosophy; its relation to Religion, to Natural Science, to Empirical Psychology; its Division (here made into Noetics, Metaphysics, Æsthetics, Ethics), &c. These topics may soon again be coming to the front; and an effort will be made to give due consideration to the author's views by the side of any others that may be presented. There is the more need to pay him this attention because of the note he himself has taken of all that has already appeared in MIND on the subjects; but he is also otherwise so familiar with philosophical literature, and evidently so conversant with the needs and difficulties of students, that he deserves to be carefully listened to on his own account. Whether the questions raised, and discussed in so comprehensive a manner as they appear to be in the volume, are quite as much questions for the "beginner" as the author regards them, may be doubted.

Principles and Practice of Morality; or, Ethical Principles Discussed and Applied. By EZEKIEL GILMAN ROBINSON, D.D., LL.D., President of Brown University. Boston: Silver, Rogers & Co., 1888. Pp. xii., 252.

"The body of the book is divided into three parts: the first being devoted to the ascertainment and distribution of fundamental principles; the second to a discussion of these principles, under the general heading of Theoretic Morality; and the third to Practical Morality. The principles are ascertained by an analysis, first of moral action and then of personality, and are distributed under the four general divisions of conscience, moral law, will and virtue. Each of these receives distinct and independent treatment, special attention being given to the discussion of conscience and of the theories of virtue and grounds of obligation. In the treatment of these latter points, all the principles involved in the latest controversies among moralists are brought under review. The real ground of moral obligation, it is maintained, is in the eternal nature of God, all other grounds being regarded as requiring in the last analysis a recognition of this as the only ultimate. The treatise properly comes under the general title of intuitional."

L'Homme Criminel. Etude anthropologique et médico-legale. Par CESARE LOMBROSO. Traduit sur la ive. Édition italienne par M. G. REGNIER et M. A. BOURNET, avec Préface par M. LETOURNEAU Criminel-né—Fou moral—Epileptique. 2me Édition française. Paris: F. Alcan; Turin: Bocca Frères, 1887. Pp. xxiv., 682.

La Criminologie. Etude sur la Nature du Crime et la Théorie de la Pénalité. Par R. GAROFALO, Agrégé de l'Université de Naples. Ouvrage traduit de l'Italien et entièrement refondu par l'Auteur. Paris: F. Alcan, 1888. Pp. xiii., 420.

Dégénérescence et Criminalité. Essai physiologique par CH. FÉRÉ, Médecin de Bicêtre. Avec 21 graphiques dans le texte. Paris: F. Alcan, 1888. Pp. 178.

La Contagion du Meurtre. Etude d'Anthropologie criminelle par Le Dr. PAUL AUBRY, Lauréat de l'Académie de Médecine (Prix Monbinne, 1887), Membre correspondant de la Société médico-psychologique, Membre de la Société d'Anthropologie de Paris. Paris: F. Alcan, 1888. Pp. 184.

These books are all contributions to the new and important science of "Criminology". Prof. Lombroso, whose great work on the subject is made more accessible by the present French translation, has long been active and influential; the movement of which he is at the head having already extended itself from Italy into France, witness from 1886 M. Tarde's brilliant and original study, *La Criminalité Comparée* (MIND xi. 587), so frequently cited by the Italian criminologists in these latest issues of their works. The investigations of the criminological school do not merely aim at constituting a new department of anthropology. While differing on many points of detail, the writers of the school agree in certain broad practical conclusions, *viz.*, the necessity for retaining capital punishment and perpetual detention in extreme cases of the "criminal anomaly" (see *L'Homme Criminel*, Author's Preface, p. xiii.). These conclusions, however, are not developed in any detail in Prof. Lombroso's work, which is essentially a scientific study of criminals with a view to determining the characters of the criminal type or types. Beginning with an account of isolated phenomena of "crime" in animals, and of the adumbrations of punishment that are met with among the social animals (pt. i. ch. 1), the author describes in the second place crime and punishment among savages (ch. 2), then "moral insanity and crime among children" (ch. 3). Thus the foundation is laid for the thesis maintained with the aid of most elaborate researches in the next two parts (ii. "Pathological Anatomy and Anthropometry of Crime," pp. 142-255; iii. "Biology and Psychology of the Born Criminal," pp. 257-669), that the criminal is the atavistic representative of the prehistoric man. The author's views have undergone some modification since the appearance of the first edition of his work. He now seeks to identify the anthropological type of the "born criminal" with the medical type of the "morally insane" (pt. iii. ch. 13); also defining the criminal and the morally insane types as sub-species of the "epileptoid" form of degeneration (pt. iii. ch. 14). His original thesis he combines, in the two chapters just mentioned, with his later ideas. The conclusions to which his arguments point are that so-called "moral insanity" is no real form of alienation, but is a "cretinism of the moral sense"; that it is thus identical with innate criminality; and that this consists in a certain combination of atavism with "epileptoid" degenerescence. Independent of his assignment of the factors of the criminal type to atavism or degenerescence, which must at present be more or less speculative, and in which some wavering is perceptible even now, the author's positive achievement is the experimental fixation, at least provisional, of the type itself. As to the existence of the "criminal anomaly" as a definite object of fruitful scientific research, there can, after Prof. Lombroso's investigations, be no doubt. The anatomical and physiognomical characters which he finds, as the result of statistical inquiries, to be marks of the criminal type may be divided into (1) anomalies that may be plausibly referred to atavism as being points in which the criminal agrees with the Mongolian or with savage races and differs from the normal European, (2) "pre-atavistic" characters, going back not to primitive man but to the lower animals, (3) absolutely "atypical" characters. In the "born criminal" there is effacement of the national type. European criminals of different races resemble one another more than they resemble non-criminals of their own race. The anatomical and physiognomical characters of the criminal type are found, singly or in combination, in a large percentage of persons condemned for crimes, though not in all. Their appearance in persons not condemned for crimes is relatively infrequent. When the cases are successively

considered of persons presenting one, two, &c., criminal characters, it is found that, as the number of characters becomes greater, the probability that the person presenting them has been condemned for a crime becomes greater in proportion. The complete criminal type, presenting all the characters, is found with great frequency among criminals; in a still larger percentage of the special class of habitual criminals; quite exceptionally among persons not condemned for any crime. None of the experimentally ascertained features of the criminal type, however, are infallible marks of criminality. The largest and most interesting division of the book is that which contains the author's physiological and psychological investigations of criminals—their degrees of sensitiveness to pain and to stimuli, physical and mental, their tattooing (on which he especially insists as an atavistic character), their *argot*, their religion, their literature, the "organisation of crime" with its Draconian codes, &c. All this forms a perfect example of scientific work of the kind. The author finds himself forced to the conclusion that the true criminal type is incorrigible. Only in one case has he observed a genuine "moral metamorphosis" of a "born criminal". In this case an attack of insanity had for its after-effect the permanent transformation of a prisoner condemned for "vol à main armée" into a philanthropist (pp. 403-4).

If Prof. Lombroso is the great scientific initiator of the Italian criminological school, Signor Garofalo is the thinker who has best and most consistently set forth its practical conclusions in relation to their theoretical basis. He has been the first, for example, to state quite definitely the result to which its researches point as regards "moral insanity". This term, he contends, ought to be expelled from the vocabulary of science (p. 91). A person who is devoid of certain moral instincts is anomalous (*vitiosus*, as the jurists say), not diseased (*morbosus*). What the mental pathologist calls "moral insanity" is simply instinctive criminality. When criminal acts proceed from a permanent criminal character and temperament, then they are acts of the person, and therefore punishable if any actions are at all. The criminal acts of the insane do not proceed from such a permanent character and temperament, but are results of the disease, that is, suffering, of the personality. The social sentiment justifies the adoption of different forms of repression in the case of "infirmity" and of "monstrosity". Penal legislation, according to the view developed by the author, ought to be the expression of the "natural reaction" of society against "natural criminality". By "naturally criminal" acts are meant hurtful actions that are universally regarded as criminal, "that is to say, which offend the moral sense of all communities not savage". Of these there are two kinds, *viz.*, those that offend the average sentiment of pity and those that offend the average sentiment of probity. There are two great classes of criminals, each marked by deficiency, in a greater or less degree, of one of these elementary altruistic sentiments, and consequently by a predominating tendency to commit one or other of the two kinds of hurtful actions. In the "great instinctive criminals" both sentiments are entirely absent. The object of punishment, when the "criminal anomaly" exists, is the permanent or temporary elimination of the criminal from society, with which he is incompatible. In the case of those criminals in whom the total absence of the sentiment of pity (much the most deeply rooted of the two forms of social sentiment) has been made manifest, the elimination must be absolute and irrevocable; for the existence of criminals of this type is incompatible with all society. With minor criminals, what society ought to aim at is the reduction of the criminal anomaly to latency. In extreme cases of the absence of the sentiment of probity, perpetua

detention in some form is necessary. The deterrent effect of punishment on others ought to be looked upon in all cases of "natural" criminality as a secondary "useful effect". The direct aim here is to resist the criminal activity of dangerous individuals by the appropriate mode of "elimination". Acts that are incompatible with the existence of a particular society or state, as well as acts that are incompatible with all society, have to be repressed; but when, in the case of such "political" crimes, the average sentiments of compassion and of justice are not offended, punishment is no longer a "natural reaction" with a view to the elimination of the offender. Its primary object, and not merely its secondary useful effect, is here simply to deter persons in general from the commission of the forbidden classes of actions. In all cases alike, the ultimate justification of punishment is social necessity. The idea of a "natural reaction" of society prescribes the form that the application of this principle shall take in cases where there is a criminal anomaly, and at the same time, by keeping in view the degree of the criminal anomaly in the individual, mitigates its rigour. Of crime in the "natural," as distinguished from the "political" sense explained above, the defect of moral instincts is a condition *sine qua non* (p. 171). Crime is not the mere result of defective social arrangements. The economical circumstances of classes and countries, so far as can be inferred from statistics, have no appreciable influence on the number of crimes committed. At most they affect the numerical proportions of the different kinds of crime. The conditions that really influence the amount of crime are the severity or mildness of punishments, and, above all, the certainty of their infliction. By statistical comparison, the author shows that all over Europe except in England there has been of late an increase of crime, especially of violent crime, while in England, on the contrary, there has been a diminution. This he ascribes to the progressive softening of penal laws and customs on the Continent, and to the fact that "England is precisely the country where modern penal theories have had least influence, where the death-penalty is applied frequently, and where other penalties are severe" (p. 215). He finds that the indulgence of French and Italian juries, and certain laxities of procedure in Italy, tend to increase violent crime to such an extent that in some districts it has probably reached its "point of saturation"; while in England "le caractère des habitants, peu portés à la sympathie pour les criminels, durs même et impitoyables pour toute transgression à la loi, y rend le jury encore possible" (p. 367). Among the causes of the excessive mildness in the repression of crime that has followed the exaggerated severity that lasted down to the present century, has been the interaction of medical theories with the old juristic maxims that the crime is to be measured by the degree of "moral responsibility," and that the penalty is to be proportioned to the crime so measured. The logical result of the demonstration of "irresistible impulse" in more and more cases must be, so long as these maxims prevail, the continual extension of the realm of irresponsibility, and with it of impunity. Both theory and practice, however, show that the admission of "irresistible impulse" as an extenuating circumstance has for its consequence that precisely the worst criminals, those in whom there is no natural check to the most atrocious actions, escape punishment. Thus society is injured in two ways. The criminals are able to repeat their crimes, and punishment fails of its deterrent effect on others. The theory of penal legislation, therefore, if it is to promote the general security, needs a "scientific renewal" from the social point of view.

With this conclusion M. Féré is in perfect agreement. What have

been called "the conquests of medicine and science over magistrates and laws" are, he says, also conquests over public security and private interests (p. 114). His general view, however, differs much from that of the Italian school. He regards criminality not as atavistic, but simply as one among other forms of "degenerescence". After summarising in an introduction (pp. 1-42) the results of his former book, *Sensation et Mouvement* (see MIND xii. 471), he goes on to apply his conclusions as regards degeneration to the special phenomena of criminality. Degenerescence, he finds, may take the forms of criminality, insanity, pessimism or suicidal impulse. In all its forms, it is increased by civilisation. It is a kind of "hereditary exhaustion," "surmenage capitalisé". One form of degenerescence may be transmitted hereditarily under another, usually a connected, form. Criminality, however, is distinguished among the forms of degenerescence by a greater frequency of "direct heredity" (p. 63). Its development in the individual is not absolutely fatal. The occasion, as well as morbid heredity, is a condition of its being brought into action. As yet no definite group of anatomical characters has been established from which the presence of criminal instincts can be inferred with absolute certainty. In these last points, it will be observed, there is no irreconcilable disagreement with the Italian criminological school. The great difference that is nevertheless manifest depends on this, that M. Féré's criminal "degenerescence" is only one variety of the "criminal anomaly" as defined by the Italian school, and that he recognises no other variety. He finds, for example, in Signor Garofalo's remark that "the moral anomaly of certain criminals" has been very well defined as "une névrasthénie morale combinée à une névrasthénie physique" the concession that criminality in general is of the nature of a "névrose" (p. 82). In fact, the criminality he himself considers is exclusively of this "neurasthenic" type. This in part explains his rejection of Signor Garofalo's distinction between the "moral anomaly" of the criminal and the "malady" of the insane. His point of view is almost identical with that of M. Letourneau in the short preface set before the translation of Prof. Lombroso's work; though the conclusions of the two physiologists as to the theory of punishment diverge in exactly opposite directions from those of the Italian school. M. Letourneau, regarding the "born criminals" of the anthropologists exclusively as diseased, and therefore suffering, would submit them to a therapeutic rather than a punitive treatment. M. Féré, overlooking in precisely the same way the distinction between a permanent criminal anomaly of the personality and a disease by which the personality is attacked, yet insists that social security and not the feeling of pity for the diseased ought to be paramount. His practical suggestions, however,—except some in which he agrees with Signor Garofalo,—are exclusively concerned with the therapeutic treatment of the insane. He places the absolute right of society to deal as it pleases with all the "degenerate" as a kind of last resort in the background; refusing in the meantime to draw any theoretical distinction between acts committed under hallucination, for example, and acts that are the result "of a temperament or of a character" (see ch. vii.). Within its limits, as a study of selected types of degeneration, the essay is full of interest, but when there is any reference to practice these limits have to be borne in mind.

M. Aubry's monograph is an example of the kind of special investigation that is now being undertaken on the lines laid down by the criminological school. His aim is to show from a series of cases the effects of "suggestion," whether direct by action or indirect by recitals,

in calling into activity hereditary homicidal tendencies. The central idea round which his facts are grouped is that on which M. Tarde so strongly insists, namely, imitation as a sort of "contagion" equally active for good and for evil. His practical conclusions are as follows:— "La prophylaxie du meurtre repose: (1) sur une saine hygiène morale, individuelle; (2) sur la moralisation des mœurs; (3) sur la réglementation des comptes-rendus des crimes par la presse; (4) sur une sévérité plus logique des tribunaux".

La Mimique et la Physiognomonie. Par Le Dr. Th. Piderit. Traduit de l'Allemand d'après la deuxième Édition par A. Girot, Professeur agrégé d'allemand au lycée du Havre. Avec 95 gravures dans le texte. Paris: F. Alcan, 1888. Pp. vii., 280.

Dr. Piderit—whose interesting work now translated into French is the subject of reference in Darwin's *Expression of the Emotions*—has sought, in a series of publications, the first of which dates from 1858, to establish the principles of a science of "mimetics," and on the basis of these to construct a scientific "physiognomy". His present work is divided into two parts—i. "Mimique" (pp. 1-164), ii. "Physiognomonie" (pp. 165-267). Both divisions are illustrated with "simple linear designs," which are partly reproductions of the same face with different mimetic expressions, partly taken from portraits or busts of eminent persons. In order to make these both more conclusive for the correctness of theoretical principles and more useful practically, the author has thought it best "to renounce completely the resources of art" and to make the drawings as "schematic" as possible. Dr. Piderit regards the physiognomical division of his work, though readers have usually found it the most interesting, as of less importance than the mimetic division. The science of mimetics, while it is the basis of physiognomical theory, is not to be regarded as existing merely for the sake of this. Independently, it is of special practical importance for artists, deserving a place, as "an auxiliary of art," side by side with anatomy. It is chiefly with facial expression that the author deals. In his view, "the origin and the very essence of the muscular movements of expressions depend on the reciprocal relations which exist between the life of the soul and the activity of the senses". The principles of mimetics, therefore, must be deduced from those of psychology. Now when particular senses, *e.g.*, those of sight and taste, are in exercise, certain muscles are in activity, and the form of activity varies according to the mode of perception or the nature of the sensation experienced. In "states of the soul" where there is no direct impression from without, what is represented is either an imaginary object or an imagined sensation. "The muscular movements of expression, then, caused by certain states of the soul are in relation either with imaginary objects or with imaginary sensorial impressions." From this "fundamental principle" of mimetics it follows that the various expressions of the emotions are analogous in form to the various modes of activity in sense-perception. The feeling of concentrated attention to an external object and the feeling that accompanies concentrated thought, or, to take another example, a bitter taste and a "bitter" emotion, have the same mimetic expression. To put it generally, the muscular movements of expression of "representative" states of mind are such as would be caused by real perception of an object of the kind and in the position imagined, or by real "sensorial impressions," agreeable or disagreeable as the case may be; the movements of expression of agreeable emotions being such as would facilitate the reception of agreeable sensations, while the movements of expression

of disagreeable emotions are such as would hinder the reception of disagreeable sensations. "Passing, mimetic traits," when frequently repeated, become "persistent, physiognomical traits". In making inferences from physiognomy to character, however, many qualifying considerations have to be borne in mind; as, for example, that facial lines capable of being produced by repeated mimetic expression may also be hereditary (and therefore, in the author's view, not significant mimetically).

La Liberté de la Volonté. Par O. K. Notovitch. Paris: F. Alcan, 1888. Pp. 256.

This book, by a Russian author, is an examination of the question of the freedom of the will in its relation to legal and moral responsibility. The author begins with a discussion of the doctrine of Schopenhauer, and decides that it is unsatisfactory in so far as it seems to admit free-will in any sense. Human actions are necessitated exactly in the sense in which everything that happens in the universe is necessitated. "Since the universal law of necessity exists, there can be no question of a responsibility for man, the animal, the vegetable, the stone. Man does what he *can*, and he is *forced* to will to act in virtue of the motives that influence him" (p. 114). Men are naturally social (as are all races of animals within wider or narrower limits). When a man acts so as to injure society, his action is "only the manifestation of some of the numerous defects of the social education that has been given him, and in no wise of what it has been agreed to call ill-will" (p. 126). The only possible means of attenuating "the motives of what is called the bad will" is "a reduction of legal regulations, and their replacement by a large field left to the action of the true moral principle upon the human conscience" (pp. 151-2). "Do you think that the refusal by the State to interfere for the protection of written transactions would be fatal for the general economical order? On the contrary: *the place abandoned by the law would be immediately occupied by its true possessor, public opinion*" (p. 160). The less a profession is regulated by law, the more moral credit it has in the community (pp. 166-7). "The village is more moral than the town because the life of the village is less regulated than the life of the town" (p. 169). In the present social and political order, "crimes, that is to say, *manifestations of insufficiencies in the education of man*, appear inevitable" (p. 218). The author, however, is careful to point out that he neither proposes to substitute a new social order for the present one nor to abolish all existing penal laws. His general conclusion is this: "That the only issue from the magic circle described by crime and punishment, is found in the reduction to its extreme minimum of the sum total of the laws and penalties formulated by legislation" (p. 225). After such thorough-going theory, the practical suggestions that follow (pp. 225-6) are quite moderate, aiming chiefly at the exclusion from legislation of all excessive restrictions on "personal or general spontaneity".

Origine et Philosophie du Langage, ou Principes de Linguistique Indo-Européene. Par Paul Regnaud, Professeur de Sanskrit et de Grammaire Comparée à la Faculté de Lettres de Lyon. Paris: Fischbacher, 1888. Pp. xix., 443.

The theory of language here expounded is that of its "development *motu proprio*" (p. xii.) according to certain laws of "phonetic evolution," which again can be explained by physiological conditions (pp. 148 ff.). "The multiplication of the forms of language by phonetic evolution,"

to which is due, in ultimate analysis, the origin of language (p. 179), is at length brought to a close by "grammatical fixation". "A l'évolution phonétique des mots, fait d'ordre essentiellement physiologique et fatal, s'oppose leur fixation grammaticale, résultat évident d'un usage traditionnel suivi d'efforts réfléchis qui ont abouti à un ensemble de conventions destinées à perpétuer cet usage. On peut dire en d'autres termes que la tradition a engendré la littérature dont la grammaire est issue à son tour, et que l'évolution phonétique, déjà ralentie par la tradition et endiguée par la littérature, a été définitivement arrêtée dans toutes les langues par la rédaction et la codification des règles grammaticales." Language is to be regarded as a living "organism developing itself *unconsciously* in the bosom of oral tradition according to laws generally analogous to those which preside at the evolution of the productions of nature" (p. 415, n.). In its detail the book is devoted exclusively to Aryan philology. It is divided into three parts:— i. "Exposé historique et critique des principales théories qui ont eu cours jusqu' ici sur l'origine du langage"; ii. "Esquisse d'une théorie nouvelle"; iii. "L'avenir du langage".

Mario Panizza. *La Fisiologia del Sistema Nervoso e i Fatti Psichici.* Terza Edizione con Aggiunte e Figure intercalate nel Testo. Roma: A. Manzoni, 1887. Pp. xvi., 441.

The author's critical examination of "the two postulates of the physiology of the nervous system" (*viz.*, "(1) that the nerves are conductors of sense-impressions from the periphery to the nerve-centres and of the motor impulses of the will from the nerve-centres to the muscles; (2) that external objects, to be perceived, have to make impressions on the organs of sense") was noticed in Mind vi. 296. He now publishes the positive work then promised; not, however, as a separate volume, but in the form of a third Part, entitled "The Physiology of Consciousness" (pp. 225-432 of the present volume) added to the two Parts of his critical work which he here republishes in a third edition with slight alterations, but with no modification of the general conclusions. The reason that determined him to reject the ordinary "postulates" was that, if they are accepted, an independent science of psychology is required which admits "the unextended"; and between its data and those of the physiology of the nervous system there is no causal relation. "The physiology of consciousness is possible only if consciousness in its form and in its content depends on physiological conditions, and so absolutely that it could not be, or at least could not be understood, without them." The rejection of the postulates makes it possible to explain consciousness physiologically from the facts alone, without the aid of any hypothesis and without the introduction, as a datum, of "the unextended," which for modern science, with its method of observation and experiment, ought to be identical with "the unreal". Expressed in its simplest form, but in other words than the author's, his theory is that consciousness is inherent in the whole nervous system, and not merely in some special part of it: impressions may be received at any point and acts of will may start from any point: consciousness, therefore, is primarily consciousness of extension, since the nervous system of which it is the consciousness is itself extended. The name he gives to that which he regards as the primary fact of consciousness is "perception," which he defines as consciousness of extension filling a certain sphere included in the larger sphere of "space". Each individual organism carries about with it in space its own "sphere of perception". When we perceive a

new object, we do not see a fragment of space adding itself to other fragments; but the object falls into a place that is already given in a total space of which we are conscious as a whole. "Given perception with the nervous substance, the perception is given of space in its three dimensions; and hence every organism that perceives, however elementary, perceives the space occupied by it, or occupied by its nervous circuit, perceives, that is, itself as solid body; and whatever other object is perceived by it is necessarily perceived as extended." Space and time with continuity are the "forms of perception". "The continuity of perception has for condition the continuity of the nervous system." For objects to be perceived, they must be in "the field of perception". The nervous substance is in the field of perception necessarily, being "the very basis of perception". The "idio-nervous perception" that belongs to it primarily is "the vague intuition of a space extended as far as the nervous system, without other determination or particular content". Perception of objects beyond depends on the relations in which the nervous substance happens to be with the environment. Since in the psychical order there is only "one irreducible and invariable datum, perception," all detailed explanation of the peculiarities of special sense must be sought in the objective peculiarities of the sense-organs. In the order of evolution, all special sense-organs arise from an "indifferent" organ of general sense. By division of a nervous system into a number of independent nervous systems, independent "consciousnesses," that is, spheres of perception, are formed, and total consciousnesses are formed by union of isolated nervous systems, as, for example, in echinoderms (p. 244). In any particular nervous system, section of a nerve, or lesion of a nervous centre such as to interrupt continuity with a peripheral region, cuts off a certain sphere of perception (p. 309). Having thus, in the first of the two chapters of his "Physiology of Consciousness," dealt with Perception, the author proceeds, in the second chapter, to deal with Will, of which he regards Emotion and Intellect as manifestations. Will, in his view, is a "force," differing from other forces in that it is determined to act by "a perception of something". Its physiological basis is "nervous excitability". While ordinary stimuli have only a single point of application, the will is present throughout the whole sphere of perception. There is thus no necessity to suppose transmission of the stimulus to a centre and its reflexion thence, before action can take place. "The only anatomical bond necessary between the point stimulated and the organs that are set in motion in the voluntary act is the continuity of the nervous system" (p. 327). The function of the grey matter of the cerebral cortex is to enable the will, when acting through it, to augment "tonicity, the force of the muscles, and hence the energy of movements" (p. 383). As he goes more into detail, Dr. Panizza's theories differ less from those of other physiologists. For example, he finds that repetition of the action of the will in consequence of similar perceptions in the same fibre makes the production of a movement easier in that fibre, and, with respect to other fibres, makes the quantity of motion greater for the same excitation (p. 330). The objection here occurs that this process, in a series of organisms, would tend to bring about a greater differentiation of the parts of the nervous system than his general theory admits of. It is not necessary, however, to accept the author's theory in order to see the force of many of his criticisms. His psychological theory of the nature of space-perception and his physiological doctrine that the whole nervous system, and not merely the central organs, is the physical basis of consciousness, are of course not entirely new; but this does not diminish

their importance. What is most distinctive in his positive view is the attempt to connect them by deducing the psychological fact of perception as primitively "extensive" from the physiological fact of the inherence of perception in the nervous system as a whole. An "extensive" perception, he thinks, can be inferred from the existence of a material basis, which is necessarily extended, while from an extended basis it is impossible to deduce the unextended "sensations" which are the "elements" of ordinary psychology. Psychological criticism, however, would show the assumption that the character of consciousness as a totality is *explained* by its inherence in the whole nervous system to be just as much an error as the assumptions of physiologists who fancy they have explained consciousness when they have found in cells and fibres a physiological basis for its elements. Dr. Panizza's negative argument is, in reality, a very good proof of the necessity for an independent science of psychology. From this obvious conclusion he only escapes by "postulating" the non-existence of such a science.

Prof. Giovanni Cesca. *L'Educazione del Carattere.* Conferenza tenuta nella R. Accademia Petrarca di Scienze, Lettere ed Arti in Arezzo la sera del 30 Novembre, 1887. Verona-Padova: Drucker e Tedeschi, 1888. Pp. 26.

Underneath the rapid scientific and industrial progress of modern times, there is, in the author's view, "an intimate and profound physical and moral degeneration, and a social and political decadence," of which the primal cause is the over-excitation due to competitive industrialism, and the preponderating symptom an enfeeblement of individual character. The most efficacious means of checking this decline is "the education of the character," that is, of the sustained will to act according to fixed principles conformable to the moral law. The points insisted on are that, for moral education, it is especially important (as Mr. Spencer has shown) to act on the emotions, mere intellectual precepts being of no avail; and that the character can be effectively educated only in the family. In a brief discussion of the factors of character (pp. 10-12), the author takes an intermediate position between those theorists who, like Schopenhauer, have held that character is immutably fixed by heredity, and those who, like Helvetius and Rousseau, have regarded education as all-powerful.

La Filosofia e la Scuola. Appunti di Andrea Angiulli, Prof. ord. nella R. Università di Napoli. Napoli: Ernesto Anfossi, 1888. Pp. xi., 408.

In the four parts of this book—which reproduce "conferences held in two successive years in the University of Naples, on the conception of positive or scientific philosophy and on its moral and educative importance"—the author deals with (1) "The Problems of Philosophy," (2) "The Criticism of Experience and the Doctrine of Knowledge," (3) "The Doctrine of Cosmical Evolution," (4) "The Doctrine of Ethics". He has proposed to "demonstrate three things: the necessary scientific reconstitution of philosophy; its social and moral significance; its educative office in the school". The view of philosophy for which he contends is that in addition to logic and theory of knowledge it includes a cosmical doctrine founded on the special sciences but distinct from them, and a practical doctrine,—in other words, the ancient "physics" and "ethics". In his theory of the aims of education, he follows Mill;

citing, for example, more than once his position that the purpose of the university is "to keep alive philosophy". While holding that the basis of modern education ought to be scientific, he contends that, even in the most elementary teaching of science, what ought to be especially kept in view is the conception of the universe towards which the special sciences contribute and the ethical and social consequences of this conception, not the mere application of science to industry. In higher education, philosophy is that to which everything else ought to point. "As the sciences are integrated in philosophy, so scientific instruction ought to be integrated in philosophical instruction, in order to be educative of all the intellectual faculties and of all the moral faculties of man."

Della Religione e della Filosofia Cristiana. Studio Storico-critico di Baldassare Labanca, Professore ordinario di Filosofia morale nella Università di Pisa, incaricato per la Storia del Cristianesimo nella Università di Roma. Parte Seconda: La Filosofia Cristiana. Torino: E. Loescher, 1888. Pp. xv., 691.

The appearance of the first part of this work, on *Primitive Christianity*, was chronicled in Mind xi. 588. The second part, which completes the work, may best be described as a history of the relations between theology and philosophy during the patristic and scholastic periods. To this the former volume, giving a view of the origins of Christian theology itself and of its relation to ancient thought, is introductory; while the last chapter of the present volume (ch. xi., pp. 557-669), on "Christian Philosophy and Modern Philosophy," serves as an epilogue to the whole. The work throughout is written in an impartial spirit and with full knowledge of the literature of the subject. The author's contention is that the relation between articles of faith and the reasoning upon them that constituted Christian philosophy was essentially unstable. The Schoolmen, like the philosophic Fathers, were in reality "implicit mystics," accepting their creed by faith, although they threw it into a philosophical form. Thus on one side philosophy tended, by its intrinsic movement, to break with ecclesiastical tradition and constitute itself independently; while on the other side the Christian philosophers were exposed to the attacks of the "explicit mystics," who did not wish to reason about their faith at all. These last were able to bring philosophical scepticism into their service; and under the combined attacks of mysticism and scepticism the Scholastic philosophy decomposed. The intellectual revolt of the Renaissance was at first indifferent to the positive doctrines of Christianity, but hostile to the traditional philosophy. Afterwards, in the 17th and 18th centuries, when the authority of the Schoolmen had been effectually broken down, the Christian creed was openly attacked and Scholasticism in its turn treated with indifference. Last of all, the attitude of modern thought towards Christianity, both in its theological and in its philosophical expression, has become historical instead of polemical. It is as a contribution to historical criticism that the author has written both this and his former volume. Italian philosophy, he holds, has now special need of historical studies of religion undertaken in the spirit of German research. And in entering upon this line of study, so characteristic of the present century, Italy will be taking up again the direction of modern philosophy that was initiated by Vico. It is instructive to compare with Prof. Labanca's positions those of Dr. Werner, the Catholic historian of the Italian philosophy of the 19th century (see Mind xi. 447).

Die Einheit des Geisteslebens in Bewusstsein und That der Menschheit. Untersuchungen von RUDOLF EUCKEN, Professor in Jena. Leipzig: Veit & Co., 1888. Pp. xii., 499.

The author here follows up his *Prolegomena zu Forschungen über die Einheit des Geisteslebens in Bewusstsein und That der Menschheit* (see MIND x. 477) by the constructive work then promised. Every philosophical construction, in his view, must be the expression of tendencies that are active in the life of the age, and must be not simply a system of thought, but also a doctrine applicable to practice. Thought is at present mainly critical, and there is no definitive system. There are, however, two strong currents of positive thought, each of which finds its expression in a certain philosophical "syntagma," as it may be called (since, though less than a "system," it is more than a "direction"), having the character of a theory of life as well as of a speculative synthesis, and of a theory to which a great part of practical life really conforms. The two great modern doctrines of "Naturalism" and "Intellectualism," which correspond to this description, are portrayed by the author in the first part of his book (pp. 1-136) in a very striking manner. He understands by Naturalism the doctrine which, starting at the beginning of modern times as an attempt to explain the world entirely by immanent causes, passes into the "mechanical philosophy" of the 17th and 18th centuries, and ends with the reduction of man to a link in a universal mechanism, consciousness being now regarded as wholly outside the series of real causes and effects. By Intellectualism he means the doctrine which starting from the opposite side, that is, from the side of mind as opposed to nature, but viewing mind exclusively as intellect, ends in the reduction of man to a link in the logical process of a universal Reason. This completed form of Intellectualism is represented by the "Noetism" of Hegel. These two doctrines, the author finds, have, in their completed forms, in spite of all differences, a marked resemblance. Equally they tend to the suppression of personality as a criterion of worth; for with both the supreme principle of explanation is the "thing," the impersonal "process," "Nature"—conceived in the one case as a mechanical, in the other case as a logical, system. Notwithstanding their resemblances, however, they cannot coalesce; for they are divergent in their applications to details. Nor is that characteristic tendency of modern civilisation which gives them their power entirely unopposed. Along with the increasing tendency to ascribe worth to an impersonal process or to external things rather than to subjective states of feeling, there is a growing sense of the value of personality. To the characteristic tendencies of modern civilisation are opposed at once Christianity and classical culture. Now, although it is impossible to restore the past in the form it actually had, its continued activity under change of form is still to be counted with. Neither suppression of any of the opposing tendencies, nor a compromise destroying their individual characteristics, is to be looked for. The only hope of reconciliation is in a deeper criticism. If it can be shown that Naturalism and Intellectualism dissolve under criticism from their own points of view, and that modern life as well as the past gives a basis for a "doctrine of Personality," then this new doctrine, provided it can take up the valuable elements in each of the others, may claim to supersede both. The aim of part ii. (pp. 137-340) is to show how each modern "syntagma" requires, for its own working-out, elements which its ostensible principles do not admit. Naturalism, it is found, can never succeed in its effort to dispense with all spontaneous activity of the spirit. The system of the natural sciences, for example, which it regards as the highest type of know-

ledge—so much so that it would make modern philosophy the handmaid of special science, as mediæval philosophy was the handmaid of theology—is inexplicable except as a product of the activity of thought. Intellectualism, on the other hand, can never succeed in completely spiritualising everything. The external obstacles to the movement of the spirit are real. Man, after all, remains in part a link in a natural process. The contradictions of things are not to be got rid of by dialectics. The criticism, however, which makes manifest the incompleteness alike of Naturalism and Intellectualism, supplies their relative justification. Each is justified in what it affirms against the other. In the doctrine of Personality, which reconciles and completes both, unity is sought not in a one-sided reference of everything to external nature or to the purely intellectual part of the mind, but in an investigation of man's spiritual life as a whole. This positive doctrine is developed in part iii. (pp. 341-499). The personality of man, it is concluded, must have its ground in a "universal Self," and the universal or "cosmical" Self must be conceived as acting "transcendentally"; the history of mankind being inexplicable either as a purely "natural" process or as an immanent process of a "cosmical Reason". In human action, the social and historical process manifested in civilisation is to be taken up into the personality so as to become the object of its interests, not the personality absorbed in the process. The principle of human activity, therefore, is "teleological," and not merely "causal"; but the ethical end is not an end for the natural or empirical "individual," but for the "person" regarded as a member of a world of personalities.

Abriss der Philosophischen Grund-Wissenschaften. Von Dr. Gustav Glogau, ordentl. Professor der Philosophie a. d. Christian-Albrechts-Universität zu Kiel. Zweiter Band: "Das Wesen und die Grundformen des bewussten Geistes (Erkenntnisstheorie und Ideenlehre)". Breslau: W. Koebner, 1888. Pp. xii., 477.

The first volume of this work appeared eight years since, and was briefly noticed in Mind v. 588. In the meantime the author has published his *Grundriss der Psychologie* (1884), which was reviewed in Mind x. 451. He now continues his larger philosophical undertaking by this second volume, the scope of which was indicated in the general survey given by him on the publication of the first. The work is to be completed by a third volume; and the reader is asked to reserve judgment on the last section of the present instalment till the completion of the whole work. In these circumstances it may suffice for the present to mention that the author describes his general position as that of "Speculative (as opposed to "sceptical" or "positivist") Criticism," and that he recognises three different "ways of knowledge," *viz.*, "The historical construction of Phenomenology, the logical of 'Ideenlehre,' and the speculative of 'Religionsphilosophie'." The second volume, like the first, is divided between "Erkenntnisstheorie" and "Ideenlehre" properly so-called. The more special titles of its two parts are:—"The nature of the Conscious Spirit" (pp. 15-150), "The ground-forms of the Conscious Spirit" (pp. 151-477). The second part (pt. iv. of the whole work) is divided into three sections:—"Ethik" (pp. 153-306), "Æsthetik" (pp. 307-426), "Noetik" (pp. 427-477).

Die Philosophie Arthur Schopenhauers. Von Dr. R. Koeber. Heidelberg: G. Weiss, 1888. Pp. vii., 319.

This "compendium," dedicated "to the memory of Arthur Schopenhauer, whose hundredth birthday the cultivated world celebrates this

year," is a very clear and good exposition. The author has not intended to add anything of his own, but to let Schopenhauer speak for himself. Prefixed to the exposition is a brief sketch of the philosopher's life (pp. 1-3). The rest of the book is divided as follows:—Part i. Propædeutic. —Theory of Knowledge (pp. 4-163). (1) On Philosophy in general and its relation to Religion, to the Empirical Sciences, to History, Art and Mathematics. (2) History of Philosophy.—Historical derivation of the doctrine of Schopenhauer.—Schopenhauer's Place in History. (3) Theory of Knowledge. Part ii. Metaphysics (pp. 164-319). (1) Metaphysics of Nature, or Nature-Philosophy. (2) Æsthetics. (3) Ethics.

Die Willenshandlung. Ein Beitrag zur Physiologischen Psychologie. Von Hugo Muensterberg, Dr. phil. et med., Privatdocent der Philosophie an der Universität Freiburg. Freiburg i. B.: J. C. B. Mohr (Paul Siebeck), 1888. Pp. v., 163.

"The question, 'how my will moves my arm,' is the problem of our investigation, and only this question, no other." This problem of "psychophysics" it is the author's aim to detach from all questions of ethics, metaphysics and theory of knowledge. He divides his investigation into three sections, the first dealing with "The act of will as a process of motion" (pp. 7-55), the second with "The act of will as a phenomenon of consciousness" (pp. 56-99), and the third with "The act of will as conscious motion" (pp. 100-163). The result of the first section is that when the act of will is considered simply as a process of motion of a "sensuous-motor apparatus," it can be explained, even in its highest forms, as a process that is preserved by natural selection on account of its utility to the organism. The result of the second section is that, from the psychological point of view, what is called the will is simply "a complex of feelings". Psychology is unable, on its own ground, to give a complete explanation of this complex. Since in the present investigation metaphysical hypotheses are not to be recurred to, the explanation must be sought in a psychophysical formula. To find such a formula is the object of the third section. The difficulty is found to be in explaining the connexion of the two series,—the series of motions and the series of feelings. After examining and rejecting some historical doctrines, the author finds that the only hypothesis that remains is that the series of feelings is conditioned by the mechanical series; for this is complete in itself, while no psychical causal series is empirically given. The two series may, perhaps, be identical in the metaphysical, but they are not identical in the psychophysical sense. Various doctrines of the localisation of feeling are discussed. The theory at which the author arrives is that consciousness is attached exclusively to sensory centres, and that perception and memory have the same material substratum. Sensory excitations together with associated excitations in the cerebral centres set going the motions of the limbs without any intermediation of motor centres. As there are no specific motor centres, so there is no specific psychical 'will' that mediates between the conscious process and the motion. An act of will is simply a complex of feelings due to sensory excitations and stored-up traces of past excitations, followed by a motion of the limbs.

Die Impersonalien. Eine logische Untersuchung von Dr. Christoph Sigwart, o. ö. Professor der Philosophie in Tübingen. Freiburg i. B.: J. C. B. Mohr (Paul Siebeck), 1888. Pp. 78.

This is an elaborate discussion, principally from the logical point of

view, of all the chief forms of "impersonal expressions". These are arranged in ten classes, according to the complexity of their psychological basis, the first class containing those that express "a simple, momentary, outwardly-related affection of sense" ('There is a sound, &c.), the last those that express the idea of an end as related to a particular situation ('There is need,' &c.). The logical treatment of the subject is founded on the distinction drawn between judgments of naming (*Benennungsurtheile*) in which there is merely a synthesis of a perception with the representation resembling it, and judgments in which a thing is united with its action or property. Genuinely impersonal propositions are found to be without any reference to a thing as the subject of the judgment (pp. 42-3). "The logical kernel of the proposition is thus a judgment of naming" (p. 77). In the word '*Tonat*, for example, what is really thought, the judgment that is passed, is nothing but the naming of what has been heard (p. 30). Since what is named is an individual and actually present phenomenon, the impersonal *Benennungsurtheil* has something in common with the "existential judgment," or "proposition of mere existence," which always refers to a concrete phenomenon and is never a general assertion about a class; but the process of thought that characterises the "judgment of naming" is reversed in the "existential judgment". In the former, the single object is given and the already known representation is thought of as agreeing with it. In the latter, the internal representation comes first; it is asked whether any single perceptible thing corresponds to it; and if such a thing offers itself, then we say, 'There is A,' 'A exists' (p. 53). The difference is that what is given in the existential judgment is not a phenomenon nameable in verbal or adjectival form, that can be detached from the thought of a thing to which it belongs, but has already the character of a *Dingvorstellung* (pp. 66-7). This particular case of the comparison of the "impersonal judgment" in its purest form with the "existential judgment" has been selected for its special interest, and also because it would be impossible in brief space to give any account of the variety of "impersonals" analysed. A compact summary of the principal results of the analysis is given in six propositions, on pp. 75-7. [See Mr. Venn's remarks above, p. 413.]

Zur Lösung der Platonischen Frage. Von Dr. Edmund Pfleiderer, Professor der Philosophie in Tübingen. Freiburg i. B.: J. C. B. Mohr (Paul Siebeck), 1888. Pp. 116.

Like the author's *Heraclitus* (see Mind xii. 305) this Platonic study is intended as a work of philosophical reconstruction, and of textual criticism only in subordination to this. The method adopted by him in both works is explained and defended; and some incidental replies are made to criticisms on the *Heraclitus*. No final conclusion as to the chronological order of the Platonic dialogues, he holds, can now be arrived at either on purely textual grounds or from external considerations. The clue to the sequence of the dialogues must be some intelligible order of thought that finds expression in them; and this can be detected only by philosophical, not by purely philological, criticism. Dr. Pfleiderer does not agree with those who find in the dialogues the development of a single consistent scheme of doctrine complete from the first. He finds the causes of the modification of Plato's thought, however, not in external impulses received in the course of his different journeys, but in an intrinsic process of development. In order to discover this process, he first examines critically the *Republic*, which he finds to consist of "disparate parts," the expression of the different

phases of Plato's thought. The first phase is that of the "realistic substantially Socratic" period, in which the thoughts of the philosopher were turned to projects of political reform. The second phase is that of disgust with practical life, of desire to escape into a supersensual world. For the majority of critics this has served to characterise Plato's thought as a whole; since it was in this stage that the "ideal theory" had its origin. The third phase is that of partial return to the real world. In this last phase, "the Socratic reawakens," and the two first phases find their reconciliation. Having distinguished the books of the *Republic* as belonging to the first or second period or to the transition between them (phases A, A—B, B), the author proceeds to trace the development of Plato's thought, manifest in his chief work, through the series of the remaining works. In the first period he places the *Lesser Hippias*, *Laches*, *Charmides*, *Lysis*, *Euthyphro*, *Protagoras;* at the end of the first period and after "*Republic* phase A," the *Apology* and the *Crito:* at the beginning of the second period the *Gorgias* and the *Meno*, afterwards *Phædrus*, *Cratylus* "*Republic* phase A—B," *Theætetus Sophistes*, *Euthydemus*, *Politicus*, *Parmenides;* at the end of the period "*Republic* phase B" with *Phædo*. The "positive introduction to the third period" is the *Symposium*, the whole purpose of which, as the definite transition to a new phase of thought, is summed up in the theory of the union of the tragic and the comic drama; to the third period belong the *Philebus*, the *Timæus* and the *Leges*. The final "redaction" of the *Republic* also may be placed in this period of "Platonic compromise".

Geschichte u. System der mittelalterlichen Weltanschauung. Von Dr. Heinrich v. Eicken, Staatsarchivar in Aurich. Stuttgart: J. G. Cotta, 1887. Pp. xvi., 822.

The admirable section on mediæval "Science" (pp. 589-671) in this work by no means exhausts its philosophical importance. It is an attempt, more carefully considered and comprehensively wrought out than any before it, to understand and reconcile the two antithetic aspects of the ecclesiastical system of the Middle Ages—on the one hand, ascetic aversion from the world, and on the other, the straining for world-dominion. Here it must suffice to indicate that the exposition falls into four parts—i. "The Christian doctrine of Redemption and its historical antecedents" (in the Roman, Greek and Jewish schemes of life); ii. "The Middle Age and the Christian Theocracy" (as this latter becomes established on the victory of the Papacy); iii. "The System of the Christian Theocracy"; iv. "The Break-up of the System". It is in part iii., after a striking estimate of the influence of Greek thought in part i., that the author chiefly displays his philosophical ability, as he deals successively with State, Family, Economic Conditions, Law, Science, Poetry, Plastic Art, within the theocratic system. Under "Science" a remarkably instructive view, within brief compass, is given of the manner, and also of the sense, in which Aristotelianism came to be accepted as the philosophy of the Church; but even more interesting, because springing from more independent and original research, are the succeeding sections on the mediæval conceptions of Nature and of History. The book, all through so full of matter vigorously grasped, is also well and effectively written. But how could so able and earnest a scholar think of leaving a work of that magnitude and importance with but two pages of general 'Contents' and not a word of Index to the endless variety of the details?

Received also :

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E. Swedenborg, *The Soul or Rational Psychology*, New York, New Church Board of Publication, xxvi., 388.
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A. Naville, *De la Classification des Sciences*, Genève-Bale, H. Georg, pp. 46.
Mme. Jules Favre (*née* Velten), *La Morale de Socrate*, Paris, F. Alcan, pp. vi., 428.
E. Beaussire, *Les Principes du Droit*, Paris, F. Alcan, pp. vi., 427.
A. Binet, *Etudes de Psychologie experimentale*, Paris, O. Doin, pp. 307.
G. v. Antal, *Die Holländische Philosophie im 19ten Jahrhundert*, Utrecht, C. H. E. Breijer, pp. 112.
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M. Dessoir, *Bibliographie des Modernen Hypnotismus*, Berlin, C. Duncker (C. Heymons), pp. 94.
L. Haller, *Alles in Allen*, Berlin, C. Duncker (C. Heymons), pp. xv., 480.
Th. Michaëlis, *Ueber Kant's Zahlbegriff*, and *Stuart Mill's Zahlbegriff*, Berlin, R. Gaertner, pp. 18; 18.
E. Fechtner, *Die praktische Philosophie u. ihre Bedeutung für die Rechtsstudien*, Wien, A. Hölder, pp. 87.
K. Bruchmann, *Psychologische Studien zur Sprachgeschichte*, Leipzig, W. Friedrich, pp. x., 358.
H. Steinthal, *Der Ursprung der Sprache*, 4te Aufl., Berlin, F. Dümmler, pp. xx., 380.
W. Lutoslawski, *Erhaltung u. Untergang der Staatsverfassungen nach Plato, Aristoteles, &c.*, Breslau, W. Koebner, pp. viii., 140.

Notice will follow.

IX.—NOTES.

PROF. LADD ON BODY AND MIND.

Prof. Ladd, in MIND No. 50, p. 311, challenges any critic to point out confusions in his treatment of the relations between body and mind. I think I can show that his theory, as set out in *Elements of Physiological Psychology*, is not so clear and consistent as he seems to suppose it.

(1) In refuting materialism Prof. Ladd has implicitly refuted his own views. He says, p. 589: "All physical events are modes of motion. . . . This is as true of the human brain as it is of the clod of the valley. Its atoms cannot be conceived of as doing anything, so long as they remain material atoms, that does not essentially consist in changing their relations in space to other material atoms." He then proceeds to show that this view of neural phenomena makes it impossible to regard mental phenomena as their product. Now it seems to me that this view of neural phenomena tells equally against his own theory of the interaction of soul and body. If the material atom as such does nothing but change its spatial relations, how can it act on something which is not in space at all? If, on the other hand, the material atom does more than change its spatial relations, it so far ceases to be material in Prof. Ladd's sense. That which is extended and movable is on this view something more than extended and movable, and it is impossible to say how much more. Why should it not be conscious, or in some way have consciousness as its product? Prof. Ladd may say that the production of consciousness by the interaction of material particles is mysterious and unimaginable. But on his own showing the interaction of material body with immaterial mind is equally mysterious and unimaginable.

(2) Prof. Ladd finds it impossible to suppose interchange of energy between brain and mind, because states of consciousness are not modes of motion. If there were such interchange, there would, according to him, be "some formula conceivable for indicating what amount of chemical change or nerve-commotion in the matter of the brain is the mathematical equivalent of the conception of home, of the sense of obligation, or of the idea of God" (p. 653). This he regards as a *reductio ad absurdum*. Now, if Prof. Ladd rejects, on the ground of its intrinsic absurdity, the hypothesis of an interchange of energy between mind and brain, he is logically bound to suggest some mode of interaction, which is not in like manner absurd. I have carefully looked for passages in his book likely to throw light on this question. The following seem most to the purpose: "Energy is stored by the processes of nutrition in the nervous elements of the brain: it becomes kinetic in connexion with the phenomena of consciousness" (p. 653). "The mind has not power to constitute in opposition to fixed chemical affinities a single molecule, or to excite the slightest movement of a single muscle, without involving the nervous system in the expenditure of the required energy. Moreover, this energy must be started in the appropriate cortical areas and descend along the allotted motor tracks" (p. 664). I infer from these statements that Prof. Ladd supposes the mind to determine transfer of energy in this or that direction without increasing or diminishing its amount. Now this is equivalent to saying that it acts like a condition of mechanical constraint. According to this hypothesis, the mind determines the motions of nerve-molecules, much as an inclined plane may determine the direction in which a ball shall roll without decreasing or increasing the energy expended in moving it.

But Prof. Ladd will admit that a state of consciousness is as little to be compared to an inclined plane, or anything of the sort, as it is to be compared to a mode of motion. It is as difficult to conceive the soul acting as a condition of mechanical constraint as it is to conceive it receiving energy from the material system and returning it again. If Prof. Ladd rejects the one view because it is inconceivable, he ought on the same ground to reject the other. If he has some alternative hypothesis to propose, I should be glad to know what it is.

(3) Prof. Ladd argues from the unity of consciousness to the existence of a real unitary being as the subject of consciousness. Now this argument has been submitted by Kant, in the *K. d. r. V.*, to a most searching examination, resulting in its complete rejection. I hold it to be a very serious ground for complaint against Prof. Ladd that he has nowhere in his book taken account of the Kantian criticism. There is no need to repeat Kant's objections here, because they have been stated again and again as clearly as they can be stated. Should Prof. Ladd offer any reply to them, I may have something to say on the subject. To ignore them as he has done is like coming over the wall instead of through the gate.

G. F. Stout.

ARISTOTLE IN JEWISH PHILOSOPHY.

Aristotle's influence over the Jewish mind culminated in Maimonides. It was not to be expected that the authority of the pagan philosopher would be accepted without a systematic effort to prove that Aristotelianism was compatible with Judaism. To demonstrate this was the task of Maimonides. But other Jewish authors were not content with merely showing that Jewish thought was consistent with Greek philosophy. To them, Greek philosophy was *taken* from Judaism, and Aristotle was a Jew.

I do not mean to enter on the very difficult question as to how far early Greek philosophy may have really been modified by Oriental influences. I should only like to indicate as a sort of curiosity some of the amusing statements on the subject which may be found scattered in Hebrew books. Maimonides asserts:[1] "Know that many branches of science relating to the correct solution of these problems (*i.e.*, Physics and Metaphysics) were once cultivated by our forefathers, but were in course of time neglected, especially in consequence of the tyranny which barbarous nations exercised over us". Jehuda Halevi (1140) excuses the errors of philosophy on the ground that philosophers had not inherited divine wisdom:[2] "They were Greeks, descendants of Japhet, who dwelt in the North, while wisdom was an heirloom from Adam given to the seed of Shem. Wisdom never departed and never will depart from that seed. Wisdom did not reach the Greeks until they became mighty, when it was introduced from the Persians, the latter having obtained it from the Chaldeans. Hence there arose famous philosophers among the Greeks neither before nor after that time. And, from the time when Greece fell before Rome, not a single eminent Grecian philosopher has arisen, even to our own day." Halevi seems to have forgotten Thales, Anaxagoras, Socrates and Plato in this argument, but he possibly means to imply that Greek philosophy derived its ideas from Persia even before the Greek victories.

[1] *Guide of the Perplexed*, ed. Friedländer, i. 71; ii. 11.

[2] *Kusari*, i. 63, ii. 66; cp. Cassel's ed., p. 172, and Graetz, *Monatsschrift*, 1860.

We must now go a step further. Josephus[1] has a lengthy statement, which, among other items of information, describes Pythagoras as indebted to the Jews for many of his philosophical conclusions. Clearcos makes Aristotle admit that he conversed with a Jew, and, in a trial of skill in philosophy which ensued, the Jew "communicated more to me (Aristotle) than he received in return". This passage in Josephus and a similar one in Eusebius[2] were undoubtedly the sources of the marvellous fables invented by Jews later on. If Eusebius could gravely quote the opinion that "Plato was only Moses talking Attic," little wonder that Jews should become enamoured of similar notions. The theory that the Greeks borrowed their philosophy from the Jews was also current among the Arabians.[3] In the Arabic *Letter of the Animals*, translated into Hebrew by Kalonymus ben Kalonymus, the Greek boasts that his nation embodied science and philosophy, whereupon the reply is given: "Whence would you have got your philosophy and knowledge, of which you brag so much, if not from the Israelites in the time of Ptolemy, and from the Egyptians in the time of Themistus? You then carried them to your own land and claimed them as original." This reminds us of another author,[4] who naïvely writes: "When Alexander went to Jerusalem, he appointed Aristotle as custodian of the books of Solomon. Aristotle thence derived his philosophy, for he translated Solomon's books into Greek and called them by his own name." Bibago[5] (1521) quotes similar stories, giving a circumstantial account of a man of the tribe of Benjamin who acted as Aristotle's tutor. "A Greek philosopher (evidently Aristotle) once said: I spoke to a Jewish sage about Nature, and what he said did not seem much to me; we then spoke of philosophy (science of God), and he carried me so far that I could not follow him until I prayed to God for power to understand." Simon the Just is quoted as the man who enjoyed the honour of converting Aristotle to Judaism. The pretended letter of Aristotle announcing to Alexander the change in his opinions is so exceedingly funny, that I venture to translate portions of it. "Thanks be to God who openeth the eyes of the blind and guideth sinners in the way; glorified be He with fitting praises, for He has dealt kindly with me, and has redeemed me from the utter folly in which I was all my life when I concerned myself with philosophy, judged everything by intellect, and composed many books. At the close of my days I have made the acquaintance of a Jewish sage, who has proved to me the truth of the Mosaic Law by signs and proofs, by means of the names of God. . . . Therefore, my dear pupil Alexander, let not my books lead thee or thy companions astray. If it lay in my power, I would collect all my writings and destroy them, for I know that I shall be punished by God for sinning and making others sin. . . . No one should read my books nor study them. . . . Inquiry is iniquity and philosophy a lie, but I sinned unknowing. I would rather be strangled than that my books should spread. . . . I write this, knowing that before it reaches thee I shall be dead. Peace to you from Aristotle who goes to his everlasting home." Aristotle was evidently an apt student, for no sooner did he adopt Judaism than he seems to have acquired a most happy facility in writing Hebrew and in making appropriate quotations from the Bible.

Other references might be given, though they are all more or less to the same effect as those already transcribed. But Joseph Ibn Caspi (1330), the commentator of Maimonides, is so important a personage in

[1] *Against Apion*, i. 1, 22. [2] *Prep. Evangel.*, ix. 5.
[3] *Archives Israelites*, 1848, p. 173. [4] *Chain of Tradition*, fol. 83.
[5] *Way of Faith*, 46 b.

the history of Jewish philosophy, that I conclude with a passage from him which I have never seen quoted before. In his letter to his son he writes: "Aristotle lived in the time of the second temple, and he learnt from our Rabbis, and all that he said is true. I do not remember that he left the fence of their words except in his opinion on the eternity of the world, and on some astronomical points in which he was right."

Thus we see a double and concurrent tendency:—(1) Aristotle's philosophy is true, *therefore*, he borrowed it from Moses; (2) Aristotle's philosophy is false, *therefore*, he became a convert to Mosaism.

I. Abrahams.

We have to chronicle with deep regret the death, at Menton, on March 31, of Jean Marie Guyau, the most fertile and remarkable thinker of his years in France. Born October 28, 1854, he had reached the age only of 33. His education was wholly due to his mother, author of some educational works very popular in France, and to her cousin, the distinguished French philosopher, M. Alfred Fouillée, with whom she became joined in second wedlock and who acted more than a father's part to the boy. He was but 19 when he was "crowned" by the Academy of Moral and Political Sciences for a memoir on the Utilitarian Moralists from Epicurus to the English school of this generation. Next year, he began to lecture in the Lycée Condorcet of Paris, but with health already affected by excessive study he was soon forced to resign his charge. Spending his winters thenceforth on the Mediterranean coast, he displayed in the few suffering years that remained to him a marvellous activity of spirit. Here is the list of his works, all noticed, at more or less length, in Mind on their appearance:—1878, *La Morale d'Epicure, &c.*, developing the first part of his youthful memoir, now in its third edition; 1879, *La Morale anglaise contemporaine, &c.*, latter part of the memoir, now in its second edition; 1881, *Vers d'un Philosophe*, described by a judge like M. Scherer as "ce petit volume de beaux vers sincères"; 1884-6, three volumes, *Les Problèmes de l'Esthétique contemporaine, Esquisse d'une Morale sans Obligation ni Sanction, L'Irréligion de l'Avenir*, different in their subjects but having all a systematic connexion. From time to time, he also contributed to the *Revue Philosophique* and to the *Revue des Deux Mondes*. Finally, he has left behind him, in the press, three other works under the following titles—(1) *La Conception sociologique de l'Art*, (2) *L'Education et l'Hérédité*, (3) *Les Idées philosophiques de Victor Hugo*. It is no common loss that philosophy has now sustained by the untimely death of so indefatigable and earnest a thinker.

The Aristotelian Society for the Systematic Study of Philosophy (22 Albemarle Street, W.).—The meetings have been as follows since our last record: March 5, short papers on various subjects—one by Mr. E. W. Cook on "The Value of Experience," one by Miss M. S. Handley on "The Nature of an Act," and three by the President; March 19, a paper by Mr. G. F. Stout on "The Scope and Method of Psychology"; April 9, a paper by Dr. Clair J. Grece on "Heraclitus and his Philosophy"; April 23, a paper by Mr. Pasco Daphne on "Conscience-theories"; May 7, a 'Symposium' on the question "What is the distinction between Desire and Will?" the papers being contributed by Prof. Bain, Prof. W. R. Sorley, Mr. J. S. Mann and Rev. E. P. Scrymgour; May 28, a paper by Prof. Bain on "The Demarcations and Definitions of the Subject Sciences". The reading of papers was in every instance followed by discussion.

Prof. G. Stanley Hall, editor of the lately founded *American Journal of Psychology*, and who for some years past has done signal service to psychological science at the Johns Hopkins University of Baltimore, now becomes President of the new Clark University at Worcester (Mass.).

With reference to a statement on p. 384 of the present No., it has already to be added that the condemnation of Rosmini, long sought for at the Vatican, has now at last been procured from the Thomist Leo XIII. In a letter to the *Athenæum* of June 16, Signor R. Bonghi reports that the philosopher's works have been put upon the Index, in respect of forty propositions marked for reprobation; Prof. Ferri also, in the last No. of the *Riv. Ital. di Filos.* (see below), discusses the decree of the Holy Office. It is a hard blow for many devoted Catholics both in and out of Italy.

The Journal of Speculative Philosophy.—Vol. xxi., No. 2. K. Fischer—Criticism of Kant (tr.). H. C. Brockmeyer—Letters on *Faust* (xiv.-xx.). H. N. Day—Psychological Theory. W. Harris—A Theory of Insanity.

The American Journal of Psychology.—Vol. i., No. 3. J. Nelson—A Study of Dreams. E. C. Sanford—The Relative Legibility of the Small Letters. C. L. Edwards—Winter Roosting Colonies of Crows. W. Noyes—Paranoia. C. F. Hodge—Some Effects of stimulating Ganglion-cells. Psychological Literature (Histology of the Nervous System; Hypnotism; Experimental; Abnormal; Anthropological). Notes.

Revue Philosophique.—An. xiii., No. 4. P. Janet—Introduction à la science philosophique: i. La philosophie est-elle une science? C. Dunan—L'espace visuel et l'espace tactile: ii. Observations sur des aveugles. Ch. Richet—Les réflexes psychiques (ii.). Analyses, &c. Rev. des Périod. Société de Psychologie physiologique (Ch. Richet—Expériences sur le sommeil à distance). L. Manouvrier—Etude comparative sur le cerveau de Gambetta et de Bertillon. No. 5. A. Binet—Le problème du sens musculaire d'après les travaux récents sur l'hystérie. Ch. Secrétan—Questions sociales: i. La journée normale. Ch. Richet—Les réflexes psychiques (fin). Variétés (A. Penjon—Travaux récents sur Vico. P. Lesbazeilles—Sur un nouvel emploi du mot 'metaphysique'). Analyses, &c. Soc. de Pscyh. phys. (H. Beaunis—Recherches sur la mémoire des sensations musculaires). Nécrologie (M. Guyau). No. 6. P. Janet—Introduction, &c.: ii. De quelques définitions récentes de la philosophie. C. Dunan—L'espace visuel, &c. (fin). G. Milhaud—La géometrie non-euclidienne et la théorie de la connaissance. Rev. Gén. (M. Vernes—Histoire et philosophie religieuses). Analyses, &c.

La Critique Philosophique (Nouv. Sér.).—An. iv., No. 3. F. Lequier—Dialogues sur le libre arbitre (suite). C. Renouvier—A. Spir. Sh. Hodgson—Le monde invisible (tr.). L. Dauriac—Pessimisme et pessimistes. No. 4. J. Chancel—De la certitude judiciaire (i.). C. Renouvier—E. R. Clay. . . . L. Dauriac—J. M. Guyau. F. Pillon—L'ouvrage de M. Ferri sur l'associationnisme.

Rivista Italiana di Filosofia.—An. iii., No. 2. L. Ferri—La filosofia politica in Montesquieu e Aristotele. R. Mariano—Il processo storico della Chiesa. C. Segrè—La statistica e il libero arbitrio in rapporto alla nuova scuola di diritto penale. Bibliografia, &c. (S. H. Hodgson, *The Unseen World*, &c.). No. 3. C. Cantoni—Giordano Bruno. L. Credaro—Le scuole classiche italiane giudicate da un professore tedesco. L. Ferri—Rosmini e il decreto del Sant' Uffizio. A. Martini—Un nuovo compendio di storia della filosofia. Bibliografia, &c.

Rivista di Filosofia Scientifica.—Vol. vii., No. 1. R. Ardigò—L'equivoco dell' *inconscio* di alcuni moderni. G. Sergi—Evoluzione umana. V. Grossi—La divisione del lavoro nelle società preistoriche. Riv. Sint., &c. No. 2. G. Cesca—La dottrina di Kant sulla 'cosa in se'. S. Lourie—I fatti e le teorie dell' inibizione (ii.). Riv. Sint., &c.

Zeitschrift für Philosophie, &c.—Bd. xciii., Heft 1. M. Sartorius—Ruht oder bewegt sich die Erde in Plato's *Timäus*. R. v. Wichert—Notwendigkeit u. Freiheit. E. Zöller—Jacobi u. Schleiermacher. E. v. Hartmann—Das Kompensations-Aequivalent von Lust u. Unlust. J. Döderlein—Warum *muss* der Raum drei Dimensionen haben? J. Mainzer—Einige neuere Schriften betreffend Kant's Erkenntnisslehre. Recensionen.

Philosophische Monatshefte.—Bd. xxiv., Heft. 7, 8. Th. Lipps—Psychologie der Komik. H. Höffding—Lotze's Lehren über Raum u. Zeit u. R. Geiger's Beurtheilung derselben. Th. Ziegler—Zur Geschichte der griechischen Ethik. Recensionen u. Anzeigen. Litteraturbericht. Bibliographie, &c.

Zeitschrift für Völkerpsychologie u. Sprachwissenschaft.—Bd. xviii., Heft 2. F. Krejoi—Der Spiritismus als sociale Erscheinung. C. Haberland—Ueber Gebräuche u. Aberglauben beim Essen (ii.). Beurteilungen.

Vierteljahrsschrift für wissenschaftliche Philosophie.—Bd. xii., Heft 2. B. Carneri—Causalität u. Sittlichkeit. A. Wernicke—Die asymptotische Function des Bewusstseins (Schluss). J. v. Kries—Ueber den Begriff der objectiven Möglichkeit u. einige Anwendungen desselben (i.). A. Marty—Entgegnung. Anzeigen. Selbstanzeigen, &c.

Philosophische Studien.—Bd. v., Heft 1. W. Wundt—Ueber die Eintheilung der Wissenschaften. H. Leitzmann—Ueber Störungserscheinungen bei astronomischer Registrirung (i.). A. Lehmann—Ueber Wiedererkennen. P. Starke—Zum Mass der Schallstärke. G. O. Berger—Ueber den Einfluss der Uebung auf geistige Vorgänge.

Archiv für Geschichte der Philosophie.—Bd. i., Heft 3. R. Eucken—Zur philosophischen Terminologie. P. Tannery—Un fragment d'Anaximène dans Olympiodore le chimiste. J. Freudenthal—Zur Lehre des Xenophanes. P. Natorp—Ueber Demokrits *γνησίη γνώμη*. A. Gercke—Ein angebliches Fragment des Theophrast. H. Schrader—Zu den Fragmenten der *Φιλόσοφος Ἱστορία* des Porphyrius bei Cyrill von Alexandria. H. Siebeck—Zur Psychologie der Scholastik. L. Stein—Die in Halle aufgefundenen Leibniz-Briefe (Schluss). F. Puglia—Se un processo evolutivo si osservi nella storia dei sistemi filosofici italiani. Jahresbericht (H. Oldenberg—Indische Philosophie. E. Zeller—Plato, 1886, 7. L. Stein—Die nacharist. Phil. der Griechen u. die römische Phil., 1886. F. Tocco—Delle opere pubblicate in Italia, 1886, 7).

A Critical Notice of Dr. Martineau's *Study of Religion*, by Prof. R. Flint of Edinburgh, written for this No., is unavoidably held over till the next.

At the last moment before going to press, we are shocked by intelligence of the sudden and lamentable death of Mr. Edmund Gurney, at Brighton, on June 22.

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MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

I.—THE HERBARTIAN PSYCHOLOGY. (II.)[1]

By G. F. Stout.

In the last No. we have considered that part of Herbart's work in which he passes by constructive synthesis from simple to complex interaction of presentations. We have now to follow him in his attempt to resolve the complex phenomena of concrete mental life into the elementary processes of which they are composed. The previous synthesis was an indispensable preliminary to this work of analysis. The facts of our actual mental life form a labyrinth which it is impossible to thread without some guiding clue, and this clue can only be found in the abstract theory of the combination and interaction of presentations. To explain the phenomena of Cognition we must show how the nature and distinctness of the presented content is determined by mechanical relations of the corresponding presentative activities. To explain the phenomena of Feeling, we must refer to mechanical relations which exist between actual presentative activities without in any way affecting the content presented. Thus, whereas the psychology of Cognition attempts to account for the presented content, the psychology of Feeling assumes it, and only investigates the mode of presentation.

[1] Continued from Mind No. 51.

Desire is, according to Herbart, a composite process involving both cognition and feeling. Hence, in order of exposition it ought to follow them. We shall treat, then, first of Intellect, afterwards of Feeling and Desire. Finally, we shall turn to the complex problems connected with the Ego-consciousness and with the so-called "Inner Sense". (The numbering of the sections that here follow is continued from p. 338 above.)

§ 19. *Perception of Time-Series.* Suppose a presentation P to be fused with three other presentations Π, Π', Π'', by its three residua r, r', r'', then if r' lie between r and r'' in magnitude, Π' which is fused with r' will be reproduced between Π and Π'' which are respectively fused with r and r''. This principle, which has already been stated in § 14, must be carefully borne in mind if we are to understand Herbart's account of space- and time-perception. The common character of all series is what Herbart calls intermediacy or betweenness. Intermediacy may be merely a mechanical relation between presentative activities, or it may be also a presented relation constitutive of the content of consciousness. For example, if a revives bcd in such a way that c rises into consciousness less rapidly than b and more rapidly than d, c is mechanically intermediate between b and d because it comes between them in the serial order of reproduction. But this mechanical intermediacy neither is nor implies presented intermediacy. Presented intermediacy involves not merely the existence of a definite order of reproduction (§ 15), but the apprehension of this order as a content of consciousness. In other words, it implies a presentation of sequence as distinguished from a mere sequence of presentations. If the presented sequence be one-sided, passing only from a through b and c to d, we have the perception of a time-series. If it starts co-incidently from both a and d and proceeds simultaneously from a through b and c to d, and from d through c and b to a, we have the perception of a space-series.

The problem before us in the present section may be stated as follows: What special mechanical connexion of actual presentative activities implies as its counterpart on the side of the presented content the appearance in consciousness of a time-sequence? According to Herbart the necessary conditions are fulfilled when a group of presentations already existing in consciousness in a state of involution (§ 14) evolves itself in serial form in one direction only.

Suppose a succession of sense-perceptions, which con-

stantly takes place in the direction *abcd*. The order of successive reproduction will be correspondingly one-sided (§ 14). Along with the successive reproduction there will always be a simultaneous reproduction, each posterior member of the series reviving anterior members co-incidently in graduated phases of distinctness, diminishing in proportion to their remoteness from it in the original sense-given order. Assume now that *d* is given in sense-perception: *abc* will then be, in the manner described, simultaneously reinstated and maintained in consciousness in a state of involution. If at the same time *a* is reproduced in sufficient intensity to occasion the evolution of the series *abcd*, the conditions requisite to the perception of a time-sequence are satisfied. For (1) we have a series evolving itself which is already present to consciousness in a state of involution; (2) we have this evolution taking place only in one direction, passing always from the more obscured to the less obscured of the involved group, until it terminates in a presentation *d* which already exists in full distinctness. Thus there are presented simultaneously two terms of a series and the mode of transition between them, which is characterised by unity of direction, so that one term is distinctively the beginning and the other term is distinctively the end. According to Herbart this is all that is involved in the consciousness of succession in time.

§ 20. *Perception of Space.* A space-series, as distinguished from a time-series, has two characteristic marks. (1) In it the distinction of beginning and end vanishes or becomes arbitrary. (2) Every term of a spatial series is the meeting-point of an infinite number of other spatial series which are in their turn interwoven with each other by cross-series. We have to consider under what mechanical conditions relations of this kind become presented in consciousness. Suppose a group of presentations *abcd*, which has been given in sense-perception in the two opposite orders *abcd* and *dcba*: if *a* and *d* are revived together, the group will be coincidently evolved from two distinct points in two opposite directions—*i.e.*, from *d* to *a* as well as from *a* to *d*. The presentations *bc* are also reproduced in a state of involution both by *a* and by *d*. We thus obtain a series which, being already present to consciousness in a state of involution, evolves itself coincidently in two opposite directions. Under these conditions the distinction between beginning and end vanishes and a series is presented in which the

terms are not successive but coexistent. This is the first essential character of a spatial order. The second essential character is the interweaving of each series of the kind described with an indefinite number of other series. This interweaving has already been described in § 18. We must suppose each member of a presented space-series to be connected with all members of all other presented space-series in such wise that on occasion lines of successive reproduction run to meet each other from every point. The formation of such a network depends on the occurrence of sensations in the order determined by movements of the sense-organs. The eyes and fingers shift to and fro in innumerable directions, occasioning every instant new sensations. Innumerable intersecting series are thus produced, each of which is characterised by the peculiar form of reproduction required for the presentation of coexistence.

The above statements apply only to the perception of linear and superficial extension. The third dimension is, according to Herbart, not perceived but inferred. It is impossible to follow him here in his discussion of this subject. Another point which must be left untouched is his account of the perception of special figures. I must, however, notice his very peculiar and characteristic explanation of the continuity of space- and time-series.

§ 21. *Continuity of Space- and Time-Series.* The nearness or remoteness of the parts of time- or space-series depends on gradation of intimacy in the fusion of the component presentations. If now a is fused through its residuum r with b, through a smaller residuum r' with c, and through a still smaller residuum r'' with d, under what conditions can we suppose it possible for c and d to appear in such propinquity to each other that nothing can be interposed between them? According to the law of intermediacy this could happen only if there were no possible residuum intermediate in intensive magnitude between r' and r''. But this supposition is excluded by the very nature of a residuum. The residua of a presentation are in no sense parts of which it is made up. They are phases of distinctness dependent on the varying proportions in which it is obscured by other presentations. It may suffer an endless multiplicity of these grades of obscuration. Hence there never can be two residua r' and r'', such that no third can be found smaller than the one and greater than the other. Therefore, from a psychological point of view, no two terms of a spatial or temporal series can be in propinquity so close that nothing can be interposed

between them. In other words, space and time are psychologically continuous.

§ 22. *Individual Thinking approximates to an unattainable Logical Ideal.* Logic treats not of the process of thinking, but of relations in the object thought of. The logical concept is the presented content considered apart from the psychological conditions and circumstances of its presentation at this or that time to this or that individual mind. Concepts in this sense, as the common property of all men and all times, are in no way psychological facts. All the marks which constitute a logical concept are equally essential. The parts of any psychological presentation are, on the contrary, of very different degrees of importance according to their relative intensity. The marks of a logical concept are all connected with each other by the same logical necessity. The parts of any psychological presentation are fused or complicated with various degrees of intimacy. From a logical point of view all co-ordinate species are of equal importance. The corresponding presentations as parts of a psychological mechanism may have very diverse degrees of dynamical efficacy. Obviously a state of consciousness in which a logical concept in the strict sense is presented, is an ideal which can never be completely realised. The concept, from a psychological point of view, is the process by which the individual mind approximates to this ideal. From the standpoint of the logician, there may be only a single concept of a triangle common to all mathematicians. From the standpoint of the psychologist, Newton had one concept of a triangle and Archimedes had another.

The psychological problem may be stated thus—How and how far are we enabled to abstract from the casual conditions under which a presentation from time to time appears in consciousness, so as to consider its presented content in relative detachment? According to Herbart there are three main steps by which this is accomplished. The first step is the process of isolation by which a presentation becomes more or less detached in consciousness from the various contexts with which it has been fused and complicated both at its first appearance and on the several occasions of its reproduction. A presented content, so isolated, may be called a crude psychological concept. The second step is the analysis of the crude concept by means of a group of judgments formulated in a group of propositions. The third step is the systematising of these judgments so as to produce a scheme of classification.

§ 23. *Isolation.* Isolation is due to mutual curtailment of series (§ 17). A presentation is the starting-point of a number of conflicting trains of reproduction, which obscure and enfeeble each other, leaving their common centre comparatively distinct as a presented content, and comparatively powerful as a factor in the psychological mechanism. This process gives rise to a more or less crude apprehension— (1) of objects in space as distinct from their space-environment, (2) of classes of similar objects, (3) of classes of similar events.

(1) According to Herbart, the content of consciousness would be given as a unity without inner partition of any kind, were it not for the conflict of presentations (§ 4). From this standpoint we ought not to ask how leaves, twigs, blossoms, branches and stem come to be combined in our apprehension of a tree, so as to appear a single thing. It is more pertinent to inquire how the tree comes to be apprehended as something distinct from the ground in which it grows. This and similar problems Herbart attempts to solve by reference to the process of mutual curtailment of series. We are enabled to distinguish a thing from its surroundings, inasmuch as its surroundings vary. For example, when we follow with our eyes the movement of an object, the psychological context in which it is presented and with which it combines, is different from moment to moment. It thus becomes the common centre of conflicting series, which more or less neutralise each other, and leave it distinct and dominant in comparison. In like manner, events in time become disengaged from their succeeding, preceding and accompanying circumstances.

(2) Crude class-concepts arise in a quite analogous way. Like elements in a multiplicity of partly similar presentations fuse with each other to form a total force. The contrary elements mutually suppress each other, and thus form a dim margin of competing alternatives. A similar result follows from repeated presentation of the same individual thing or person in varying conditions. In this case a crude concept of the individual is generated, essentially similar to the crude concept of a class.

(3) Crude general concepts of events come into being in exactly the same manner as crude general concepts of things. They constitute the rude form of 'laws of nature,' as presented to the consciousness of the man of science.

The next stage in the development of the concept depends on the formation of judgments in which subject and predicate are definitely discriminated.

§ 24. *Judgment.* Every familiar object within the circle of our experience gives rise from time to time to new sense-perceptions, which revive pre-formed similar presentations, and fuse with them. In this manner the crude concept continually assimilates fresh material. From a psychological point of view, we may call each instance of such assimilation a judgment. But judgments in this broad sense will not help us to advance from the crude to the developed concept; for they are by definition nothing more than the successive acts by which the crude concept is formed. Assimilation of the kind described may take place before we are aware of it. It need not involve any distinct consciousness of antithesis between the combining groups, or of the process through which they become united. The logical form of judgment, in which subject, predicate and copula are clearly distinguished, is not, therefore, necessarily implied, whenever a new experience blends with the psychological resultant of previous similar experiences. We have now to consider (1) under what special condition the logical form of judgment does appear in consciousness, and (2) how it affects the development of the concept.

Herbart's answer to the first question is that the distinction between subject and predicate is apprehended only when the process of assimilation is obstructed and delayed so that the factors involved in it can be discriminated and separately named. This is the case when the fusion of similars cannot be completed without previous conflict of appreciable duration between certain components of the assimilating group, which corresponds to the logical subject, and opposed elements in the new material to be assimilated, which corresponds to the logical predicate. The conditions under which this may take place are manifold. Judgments are often occasioned by a striking change in an object during the moment of perception; *e.g.*, the exclamation, 'They run,' when an enemy is put to flight. Objects which are partly familiar and partly unfamiliar give rise to a very large and important class of judgments. The child who has seen sheep a great many times ceases expressly to notice the fact that they are sheep. But if for the first time he sees one with black wool, fusion between the new experience and the mental pre-formation is delayed, so that a judgment takes place, in which subject and predicate are discriminated.

The above examples involve a relation between a sense-perception and pre-existing mental elements. But judgments also arise, independently of sense-experience, through the internal working of the psychological mechanism. One

concept, crude or developed, may tend to assimilate another, containing components which resist assimilation.

It may happen that the conflict between subject-group and predicate-group results not in their union, but in the exclusion of the latter from consciousness. This process of exclusion, when it occupies an appreciable time, is represented by the negative copula.

It is obvious that what is essential to the act of judgment may be common both to man and other animals. What is distinctive of human intelligence is not the act of judging, but the expression of the judgment in words. The function performed by Language is twofold. In the first place, it gives a permanent embodiment to the judgment, which is in itself a transient process, ceasing to exist so soon as its product comes into being. This use of language makes possible progressive analysis of the crude concept into a series of predicates permanently formulated in a series of propositions relating to the same subject. We may adduce as a most important instance of this operation the analysis of sensible things into groups of qualities. The child sees sugar, takes hold of it with his hand, and puts it in his mouth. These sensations blend at first in a single unanalysed presentation. It is only through acts of judgment which become possible with an enlarged experience that the tactile sensation, the visual sensation and the taste-sensation become severally distinguishable. By the expression of these judgments in verbal forms, which become part of the permanent content of the mind, it becomes possible to resolve the thing into its qualities. We can then distinguish the thing from the sum of its qualities only by regarding it as the unknown cause of their union.

The second great function of Language is to stimulate the formation of judgments. Whenever the same object suggests two appellations, one of which is finally suppressed and the other preferred, an act of judgment takes place, ascribing to the presentation-group connected with the rejected word a predicate incompatible with the given object. At the same time this predicate is denied of the presentation-group which constitutes the meaning of the word selected. By judgments of this nature the signification of words becomes progressively more fixed and determinate. The application of the same term to a plurality of objects gradually comes to depend, not on a vague general resemblance, but on likeness in certain definite respects. As words thus come to be applied in a definite and unvarying way, the concepts, with which they are connected, become *ipso facto* precise and

stable, as regards both what they include and what they exclude. In ordinary thinking, this process is very imperfectly carried out, so that almost all general terms familiar in common life are used with a certain laxity, implying variability in the corresponding concepts. But in scientific terminology such vagueness disappears, or ought to disappear, each technical word being used always in the same sense, as fixed by exact definition.

§ 25. *Classification.* Classification depends on the arrangement of predicates in a serial order determined by their qualitative affinities, so that any two differ less the more they approximate in the series (§ 14 *ad fin.*). A number of judgments, such as A is *a*, A is *b*, A is *c*, A is *d*, give rise under favourable conditions to a series *abcd*, in which the intimacy of fusion between the terms varies inversely as their mutual contrariety. Series of this kind are in form analogous to the spatial, differing only in their genesis. Hence in speaking of them we are compelled to use expressions which have the appearance of being metaphorical, because they are wrongly supposed to refer primarily to space-relations. Thus tones of various pitch are spoken of as forming a linear series, on which intervals can be measured. Similarly violet is said to lie between blue and red, and orange is said to lie between red and yellow. These and the like expressions are by no means mere metaphors. They depend on the essential analogy between space-series and qualitative series. By means of these quasi-spatial series we are enabled to institute comparisons, in which we estimate the amount of likeness between presented contents, instead of vaguely recognising that they do or do not resemble each other. For the attributes compared present themselves as terms of a series separated from each other by intervening terms which measure, so to speak, the qualitative distance between them.

We are now in a position to explain the co-ordination and subordination of concepts, in which classification consists. Concepts are co-ordinate in so far as their constituent predicates can be arranged in qualitative series. A concept defined by predicates standing for these series as wholes, instead of this or that special term composing them, is the genus to which the co-ordinate concepts are related as subordinate species. Thus the generic concept of a bird is constituted by characters, severally susceptible of those graduated modifications which form the specific marks differentiating one class of birds from other co-ordinate classes.

§ 26. *Space and Time as conceived.* We must distinguish between perception of the spatial and the temporal in this or that particular presentation, and conception of time and space as pure forms of succession and coexistence. The origin of space- and time-concepts is due primarily to fusion and reproduction of series arising from their likeness in serial form, accompanied by mutual obscuration of their specific contents arising from qualitative contrariety between them.

The main stages of the process in the case of space are according to Herbart as follows. We perceive an object moving against a diversified background, and at every moment it is presented in a new spatial environment. Let us call the perceived object A and its successively perceived environments *p*, *q*, *r*, *s*, &c. From a psychological point of view *p*, *q*, *r*, *s* are series differing in the quality of the sensations composing them, but agreeing in so far as they are all space-series of a similar form, and in so far as they all bear a similar spatial relation to A. Since A has been co-presented with *p*, *q*, *r*, *s*, &c., it will tend to reinstate them all in consciousness whenever it is itself reproduced. In such collective reproduction *p*, *q*, *r* and *s* will reciprocally obscure each other in so far as they are composed of contrary presentations, and they will support each other in so far as they agree in serial form. Thus A will appear in consciousness as the centre of series which are distinctly spatial in form and bear a distinct spatial relation to it, but which are in the highest degree dim and indeterminate as regards their material content. Suppose now that we have similar experiences in the case of a number of other objects, B, C, D, and suppose that the obscure spatial environment, which attaches to B, C, D, bears to them a relation similar to that which the obscure spatial environment of A bears to A. A, B, C, D will then fuse with each other and reproduce each other in virtue of their purely formal similarity, although they are opposed in other respects (§ 16.) Hence arises the crude psychological concept of a spatial configuration. From this it is only a step to the crude concept of space in general. We have experience of an indefinite multiplicity of spatial figures, agreeing and differing in an indefinite multiplicity of ways. But in one respect they all agree, *i.e.*, in being constituted by some space-relation. Accordingly there is generated a presentation in which only the space-form in general is relatively distinct, all special configuration being dim and indeterminate, owing to reciprocal arrest.

§ 27. *Presentation-masses.* It is impossible that psychological series should uniformly be reproduced in an order determined entirely by the union *inter se* of the terms composing them. They are always subject to more or less serious modification arising from the action of other presentations which happen to be in consciousness at the moment, or which they themselves recall by immediate reproduction. Familiar illustrations may be taken from the falsifications of memory, which are constantly occurring in ordinary experience. We fail to note gradual alteration in persons with whom we are in constant intercourse, because from day to day reproduction of the past is moulded by present perception. Now in so far as the flow of presentations, instead of being restricted to a fixed serial form predetermined by preceding experience, is thus subject to variations caused by the casual concurrence of previously unconnected elements, we have what Herbart calls "the uncontrolled play of the psychological mechanism". This is to be found in the most striking form in children and uneducated persons. The conversations of Mrs. Nickleby may serve as an illustration. The uncontrolled play of the psychological mechanism gives place to disciplined thinking, in so far as presentation-masses come into being, which are reinstated and maintained in consciousness without lasting or important modification from extraneous conditions, because their mode of reproduction is determined mainly and ultimately by the internal connexion of their components. This relative independence and permanence is due to their mechanical predominance, whereby they repress whatever is antagonistic to them. Such mechanical predominance is founded on (1) the multiplicity and intensity of their component presentations, (2) the intimacy and the manifold interweaving of the combinations by which these components are interconnected. It must be carefully noted that this internal cohesion and consequent stability is largely due, and is sometimes wholly due, to fusion which arises from similarity in serial form. To estimate the importance of this consideration, we must bear in mind that presentation-masses consist not of simple series, but rather of series of series. In the course of a varied experience many distinct masses are formed connected with special localities and occupations, such as the church, the theatre, the office, the garden, the chess-board, and the like. To each of these may correspond a large and powerful group, of which the constituents cohere *inter se* with such strength and complexity of interconnexion, that the whole victoriously

maintains its characteristic form against interfering conditions.

A presentation-mass may be a concept, or it may be a system of concepts, such as the Hegelian logic in the mind of Hegel, or it may be without any assignable logical organisation, as for the most part those masses are which constitute ordinary common sense.

§ 28. *Apperception.* Apperception is the process by which a presentation-mass assimilates relatively unstable groups, fusing with homogeneous, and repressing antagonistic, elements. The new material assimilated may be either given in sensation, or reproduced by the internal working of the psychological mechanism. In the former case the process is called outer apperception; in the latter it is called inner apperception; in both it is essentially similar as regards its stages and results. Herbart lays great stress on this analogy, which is of the highest importance in the explanation of what is called inner perception, or, less accurately, the inner sense. In outer apperception the sense-affection is produced before it is apperceived. At the outset it possesses more unarrested intensity than is compatible with the conditions of equilibrium. Hence it has an initial advantage in the conflict with pre-existing contrary presentations, so that it causes them to sink towards the mechanical threshold, or even below it. At the same time, by immediate reproduction, it recalls or raises to fuller distinctness presentations which resemble it. These emerge slowly at first, but with gradually increasing rapidity.

This is the first stage of the process; in it the sense-given presentations are relatively active and the mental pre-formation is relatively passive. In the second stage this relation is reversed. As susceptibility to external stimulation diminishes, the sense-affection receives less and less support from this source. The initial advantage which it possessed by reason of its comparative remoteness from its statical point ceases to exist as equilibrium is gradually restored. On the other hand, the pre-formed presentation-mass rises more and more into consciousness, and brings into play the superior strength which depends on its internal cohesion and the multiplicity of its components. The more any of these are arrested, and the longer the process lasts, the more strongly is the reproductive energy of the rest called into action. For the help rendered by a to β increases in proportion as β sinks beneath the phase of distinctness in which it was originally co-presented with a (§ 13; cp. also § 32). Now, the growing

dominance of the pre-formed mass would merely cause the repression of the sense-given group, were it not for the points of affinity between the two. So far as they are homogeneous they fuse. The appercipient group retains in consciousness what is kindred to itself, and at the same time represses what is antagonistic. The result is that after suffering considerable modification the sense-given group becomes incorporated with the pre-existing system of presentations.

In the case of inner apperception we must assume the concurrence in consciousness of a stable and powerful mass and of a comparatively weak and unstable series. We must further assume that the weaker group has a temporary mechanical advantage, because it is at the outset considerably above its statical point. This is always the case when the weaker group rises first and the stronger is subsequently reproduced. Moreover, there must be points of community between the two, in virtue of which they fuse, so that the weaker is retained in consciousness by the stronger, when it would otherwise sink. Finally, there must be points of antagonism, so that the stronger cannot fuse with and uphold the weaker without modifying it considerably. When all these conditions are fulfilled, internal apperception takes place. When any of them is unfulfilled, it fails to take place. There is no need to describe its successive stages, as they are essentially similar to those of external apperception.

§ 29. *Apperception as a Condition of Perception.* To be in consciousness is not the same thing as to be an object of consciousness. He who is engrossed in thought or in observation of some interesting object fails for the time to take notice of aught besides. Yet he may afterwards recognise that he has been affected by many sensations of which he was not at the moment aware. There is always a dim margin of presentations, which, though not distinctly attended to, are none the less components of the total conscious state. No one is clearly aware of all the motives which urge him to an action, where these are highly complex. The poet or artist does not as a rule analyse the mental processes by which his works are produced. It is therefore necessary to inquire under what conditions a presented content acquires that peculiar distinctness, which we express by saying that we notice it, observe it, or attend to it, or that it is an object of notice, observation or attention. The solution of this problem will also enable us to explain the use of the word Perception in ordinary language. For

we are accustomed to say that we perceive things and events, physical or mental, when we notice them, and not otherwise. Herbart's answer to the question before us is that, as a rule, in our developed consciousness, a presented content becomes an object of attention only through the apperceptive process. In the case of sense-perception, the strength of the external stimulus and the susceptibility of the subject contribute more or less to the result. But they are very rarely the sole, or even the dominant, conditions, at least in the developed mind, which is organised into stable presentation-masses. Practically, Herbart treats apperception as the sole constant condition of attention. Apperception is, in fact, from the mechanical point of view, what attention is from the point of view of the presented content. We are now in a position to understand how it is that an inner sense is currently supposed to exist analogous to the outer senses. The analogy breaks down completely, if we construe it as meaning that psychological processes must make an impression upon some inner-sense organ or faculty, as physical stimuli affect the eye or ear. But there is a real analogy in so far as the apperceptive process is implied in both cases; so that, if we may not speak of an inner sense, we are at least justified in speaking of an inner perception, provided that we use the word perceiving as synonymous with noticing. In the light of this doctrine it is easy to understand why different persons, or the same person at different times, have different perceptions under similar circumstances. For all depends on the nature of the dominant apperceptive masses, and these vary indefinitely according as individual experience varies. A skilled musician may easily fail to notice a grammatical blunder; but he will distinguish out of a large choir of voices the one which is at fault. The physician perceives in a moment symptoms which have escaped the long and anxious scrutiny of friends and relatives. The man who is in the habit of examining and criticising his own motives will often detect in himself impulses which might have existed in greater strength, in less introspective minds, without their presence being suspected. It would serve no purpose to go on multiplying instances. The general principle which needs to be emphasised is that, in order to account for a perception (in the broad sense of the word), we must indicate the apperceptive mass through which it is possible, and show how this apperceptive mass is formed.

§ 30. *Categories of Outer Perception.* Thus, if we ask how

the relations expressed by the words Cause, Effect, Substance, Attribute, When, Where, Whence, &c., come to be objects of consciousness, we can only answer by referring to certain concepts, which primarily come into being through fusion by reason of likeness in form. So far as such concepts, functioning as apperceptive masses, mediate the perception of particular terms in particular series, they occasion judgments, which have for their predicates what Aristotle called Categories. It is only when particular space-series are apperceived by the space-concept in general that we recognise spatial position as such. It is impossible here to follow Herbart in his detailed treatment of the special categories or ultimate formal aspects of physical things. The categories of inner perception, or ultimate formal aspects of psychological phenomena, as such, will receive special consideration later on by way of introduction to the discussion of the Ego-consciousness. We must now discuss Feeling and Desire.

§ 31. *Feeling.* The mere rising and sinking of presentations, together with the order in which this rising and sinking takes place, involves no modification of consciousness except such as directly affects the nature and distinctness of the presented content. But there are certain modes of mechanical interaction, which must have some counterpart in consciousness, because actual presentative activities are implicated in them, and which nevertheless need involve no variation in the content presented.

An arrested presentation, on removal of the arresting conditions, will of itself rise into consciousness independently of extraneous help. In such a case, what takes place is merely the emergence from total obscuration and the gradual increase in distinctness of a presented content, and there is no reason for supposing that any further modification of consciousness is involved in the process. Now if the presentation referred to not only emerges of itself in the manner described, but is at the same time acted on by the reproductive energy of allied presentations, what modification of consciousness will this added circumstance imply? Mechanically, there is an increase of the total force through which the presentation rises. But there is not a corresponding increase in the rapidity with which it rises; for this is proportioned—not to the sum of the reproducing forces but—to the greatest single force among them. Now, according to Herbart, the excess of the sum of the forces in operation over what is required for the result actually produced exists for

consciousness as an agreeable feeling. Under this head we may instance the pleasures of gratified expectation, including in part those of successful activity, which are to a large extent due to immediate reproduction by sense-perception of presentations already emerging through the internal working of the psychological mechanism.

This coincidence of free emergence with mediate reproduction is only one case in which the total reproductive force is more than adequate to the effect produced by it. It is therefore only one source of pleasurable consciousness. Pleasure may be defined as consciousness of the support which presentations yield to each other, and this consciousness arises if, and so far as, the support yielded is superfluous in the way described. Thus, whenever a presentation rises with a certain rapidity or is maintained in consciousness in a certain degree of distinctness, by the simultaneous operation of auxiliary presentations which collectively constitute a greater force than is required for the purpose, agreeable feeling must result. Here belongs the pleasure felt in contemplating a conclusion led up to by many independent but converging lines of argument.

The condition of pleasurable feeling is also fulfilled whenever a number of series which have severally to contend against the same obstacles evolve themselves concurrently in consciousness. The more fully each emerges, the more completely is the common resistance overcome, so that it becomes easier for the others to rise. In other words, there is a progressively increasing preponderance of the forces through which the series evolve over the forces which tend to suppress them. Hence results a feeling of satisfaction, joy or exultation. The pleasure of dancing to music is an obvious example under this head.

Further, if two previously disconnected presentations coincidently emerge in clear consciousness and immediately fuse with each other, they form a new total force, and the statical conditions are therefore altered in their favour. Thus the series to which they belong acquire, *ceteris paribus*, new energy and freedom. Something of this kind occurs whenever an unanticipated conclusion is obtained by logical combination of known data.

Agreeable feeling arises when, and so far as, the mechanical union of presentations has a counterpart in consciousness which is not in any way a modification of the presented content. Similarly, painful feeling arises if, and so far as, the mutual arrest of presentations has a counterpart in consciousness which does not affect the nature or distinctness

of the content presented. This occurs whenever one and the same presentation is simultaneously acted on by others, some of which tend to suppress and others to support it. In such a case conflict continues to exist without exclusion from consciousness of the conflicting presentations. It must therefore occasion a tension existing in and for consciousness. This modification of consciousness is a painful feeling. Accordingly disagreeable consciousness is present when a presentation rises by mediate reproduction which would not have risen apart from it, or when from the same cause it sinks more slowly than it would otherwise have done, or when it is maintained against repressing forces in greater distinctness than its own unaided strength would yield. We may take as an illustration the feeling of tediousness which is produced by a speaker in his hearers when they fail to keep pace with him, either because their thoughts flow too fast or too slow. In either case his words are perpetually setting in motion trains of presentations, which they as constantly suppress. A special source of painful feeling is the existence of presentations beneath the mechanical threshold. These influence the course of events within consciousness without being themselves presented. Their operation is felt as a painful pressure, especially noticeable in those restless moods which it is difficult to refer to any definite cause. Pleasing and painful feelings originate also in the process called "fusion before arrest" (§ 10). Fusion before arrest is a source of pleasure if, and so far as, either the tendency to fuse predominates over the resistance to fusion, or, inversely, the resistance predominates over the tendency to fuse. It is a source of pain in proportion as the two tendencies approach equipoise. Herbart applies this theory in detail to the explanation of musical concords and discords. He holds that most elementary æsthetic feelings are to be accounted for in a similar way.

Purely sensuous pleasures and pains are explained on the same lines. Only in their case the presentations between which fusion takes place are not separately discernible. They are merged in a single distinctionless *quale*, which defies all attempts to resolve it into its component parts.

Before concluding this section it is necessary to lay stress upon a point, apart from which Herbart's doctrine of Feeling would be a chaos of confusion. We have considered the conditions of pleasure separately from the conditions of pain. But in almost every concrete state of consciousness both are present coincidently. For instance, when a presentation rises against obstacles by help of other presentations with

which it is fused or complicated, although if dependent only on its own strength it could not have risen, then according to the above statement disagreeable feeling must attend the process. But if the forces, by help of which the presentation rises with a certain rapidity, are more than adequate to cause it to rise with this rapidity, an agreeable as well as a disagreeable feeling must be present. This and similar cases are fully accounted for, when we turn to actual experience. It is the view of common sense that unmixed happiness is hardly attainable even for a moment. Unmitigated misery is also supposed to be rare, though perhaps not equally so. In almost every state of consciousness elements of satisfaction and dissatisfaction interpenetrate. We are happy or unhappy only *a potiori*.

§ 32. *Desire and Volition.* Desire is, according to Herbart, a composite mode of consciousness, belonging on the one hand to the region of feeling, on the other to that of the presented content. It has no unique character by which it can be marked off from both. A desire exists when a presentation rises by help of another in spite of resistance offered by a third. This process involves, as we have seen, accompanying feeling, painful or pleasant, or both. It also involves variation in the distinctness of the content of the emerging presentation. Besides this, there is a progressive modification of the content of consciousness as a whole; for as the presentation rises it revives and represses others. If the rising presentation reaches a certain stage of distinctness and dominates the total mental state to a sufficient degree, bodily action results; or if external opportunity be wanting, a disposition of the psychological mechanism is produced, which gives rise to the action so soon as the external opportunity arrives. All these circumstances are connoted by the word Desire. That disposition of the psychological mechanism which results from desire and gives rise on occasion to action is called Volition. The volition before it is carried out is an intention.

In the case of sense-desires, such as hunger, thirst, &c., the help through which the desired object rises in consciousness is an organic sensation. Non-sensuous desires depend on the action of the presentation-masses which are dominant at the moment. We feel a very appreciable and often a painful desire when a familiar object is missed. A picture, for instance, is gone from the wall of our room. All the surrounding objects recall it, while the view of the empty space on the wall simultaneously suppresses it. Accordingly

we feel the want of the picture. In other words, we desire it. Of course the strength of a desire depends on the strength and complexity of the union of the desired presentation with other components of our conscious state.

One point which requires special notice is the mode in which desires are intensified by being thwarted. If we try to open a door and fail, we feel a desire to open it which, *ceteris paribus*, becomes more eager the longer our attempt is frustrated. This depends mainly on the different rapidities with which different reproductive forces operate. Suppose a series a, b, c, d, such that a is combined with d by a smaller residuum than b, b by a smaller one than c, then, apart from hindrances, the rapidity with which d is reproduced will depend wholly on c, which is the strongest force operating to reproduce it. The others are, so to speak, forestalled, since d is already rising with a greater rapidity than they could communicate to it. But if d is checked in its emergence the case is altered; for, instead of rising with greater, it may now rise with less rapidity than it could derive from the reproductive energy of a and b. In so far as this takes place, we may regard the emergence of d as dependent on the sum of the forces a, b and c. This process, by which d has recourse, as it were, to its reserves may be indefinitely extended. It may take place simultaneously in the series A, B, C, d and α, β, γ, d, as well as in a, b, c, d. It must also be noted that the longer the desire thus swells like a stream against a barrier, the more fully do connected groups of presentations evolve themselves. If a, b, c, d, A, B, C, d, α, β, γ, d, are thrown into a state of tension, then from the several members of these series collateral trains of reproduction may evolve themselves, and combine with each other, if they are not already in combination. Thus the hindrances which thwart desire may in a high degree promote the development of the individual mind. "Necessity is the mother of invention."

§ 33. *Apperceptive Masses as Permanent Seats of Feeling and Desire.* Feelings and desires are reproduced only by reproduction of the combinations on which they depend. Hence a permanent grouping of presentations involves also permanent predispositions to certain desires and feelings. Thus the great apperceptive masses become the seats of special moods, cheerful or melancholy, and tendencies to special kinds of actions. In this manner is constituted what we call the character of a man. If the apperceptive mass, which is the seat of a settled desire, has the concept-form,

the result is generalised desire—*i.e.*, recognised maxim or principle of conduct. In so far as the apperceptive masses of an individual mind are connected with each other in the relation of part to whole, so that the more comprehensive can on occasion apperceive the less comprehensive, the resulting character is reasonable and consistent. In so far as they are disconnected, instead of being organised into a system, the resulting character is unreasonable and inconsistent. A man with a mind of this type is called a creature of impulse, a slave of passion, &c.

§ 34. *Categories of Inner Perception.* The categories of inner perception depend on the formation of concepts, crude or developed, which have as their common character some purely psychological relation, the specific qualities of the related presentations being indefinitely obscured. By purely psychological relations are meant forms of combination among presentations other than those by which sense-perceptions are connected *inter se*. Sense-perception itself, so far as it involves apperception, is constituted by a psychological relation. For it exists only in so far as sense-given presentations enter into combination with pre-formed masses. Hence by indefinite repetition of sense-perceptions a crude concept comes into existence, having as its common character the peculiar form of interaction which takes place between the mental pre-formation and a new presentation, arising independently of the reproductive working of the psychological mechanism. A sense-perception is recognised as such only when it is apperceived by a concept of this kind. Similarly, there may arise a crude concept in which the form common to all apperceptions is dominant, all else being obscured. By means of this concept the relation between subject and object is recognised, at least in its purely cognitive aspect. If the subject is to be recognised, not merely as knowing but also as willing, at least a crude concept of volition must exist. The salient character in this case is the general form of process, according to which a desire, having acquired a certain intensity and predominance, is followed by a series of sense-perceptions, beginning with movements of the body and ending in the satisfaction of the desire. The same mass to which the desired presentation belongs apperceives the sense-perception through which it is satisfied. It is at once the starting-point and the termination of the whole series of changes. It is at once active and passive, initiative and receptive. From both points of view it is regarded as a subject: from the one as subject knowing,

from the other as subject willing. Now that we have found the relation between subject and object, it is time to investigate the Ego-consciousness.

§ 35. *Psychological Problems relating to the Ego.* In the most highly developed human experience the Ego is recognised as having three distinctive marks. (1) It is the permanent centre of conscious experience. (2) It is one and indivisible. (3) It is a subject which is aware of itself and of all else. Our problem is to show through what apperceptive mass a presentation, having these three marks, can become an object of consciousness. The most convenient mode of approaching the question is to begin by investigating the recognition of the Ego as something permanent throughout the ever-changing phases of conscious experience. It is obvious that in order to account for this we must discover some presentation-mass which apperceives, or at least is capable of apperceiving, every presentation. Following Herbart's plan, we shall consider this question first in relation to the earlier stages of mental development, and then pass to the more advanced.

§ 36. *The Body-complex.* The child in early stages of its experience refers to itself by name as if it were a third person. It says for instance, 'Charles will eat, walk,' and the like. Now what is this something which the child names before it uses the word 'I'. What is the omnipresent group of presentations which pervades the varying phases of its conscious life? Herbart answers that the persistent constituent of its experience is at the outset the presentation-complex which arises from the perception of its own body. In this perception is included not only the seeing and touching of the limbs, but also organic and muscular sensations. Hence arises a highly composite complex analogous to those which constitute the presentations of external things. The unique character of the body-complex is contained in the fact, that it is always apprehended along with everything else, and that the resultant presentation-mass mediates the apprehension of everything else, being co-appercipient in all apperceptions. The next step in the development of the Ego-consciousness is the distinction between animate and inanimate objects. Under certain circumstances the child himself feels pain or pleasure, and in consequence behaves in a certain manner. When he observes other things under similar circumstances behaving in a similar manner, he ascribes to them also pain and pleasure, and regards them

as alive. When, on the contrary, he can trace in their behaviour no analogy to his own, the tendency to regard them as alive is repressed. Thus he comes to frame negative judgments denying life to such objects. In this way a new determination is added to the body-complex. It is recognised as a living, in contradistinction to a lifeless, thing. The next stage is a highly important one: it depends on the distinction between those living things which contain within them representations of things external to them, and those which do not. This point of view is of course extremely crude, but it constitutes an essential step in the development of the Ego-consciousness. The mode in which it originates will be most clearly exhibited by an example. A child sees a dog run away from the stick which is raised to strike it. He cannot fail to think of pain as already felt by the dog before the blow. Only the pain will be thought of as anticipated, not as real. Moreover, he figures the stick as present to the dog, *i.e.*, as in some sense within the dog. Otherwise the dog would not run away. But it is obviously not the real stick which he thinks of in this way; for the real stick is external to the dog. It is therefore an unreal stick, *i.e.*, the representation, or image, or idea of the stick. For an image is that which appears like a thing, and which, nevertheless, is not the thing itself. Thus the child regards the dog as having within it a representation of what is without it. This point of view, acquired in the first instance by observation of other living beings, he easily and inevitably transfers to his own case, inasmuch as he comports himself in an essentially similar way. He is now, therefore, able to regard the various objects of his consciousness as having a common character pervading their differences, *i.e.*, as being representative images of something other than themselves. This is a most important addition to the central and permanent mass constituted by the body-complex. Let us now consider the various elements which may fairly be regarded as constituting the Ego-consciousness at this stage. We find, then, the presentation of the body (1) as a visible and tangible object, the spatial centre by reference to which the position of other things is determined; (2) as connected with organic sensations, which accompany it as they accompany no other object of consciousness; (3) as containing representations of things external to it, which remain with it when the realities represented are absent; (4) as containing desires dependent for their gratification on its nearness or remoteness from the thing represented by the presentation which is the immediate object of desire; (5) as the starting-point of those

series of changes which follow volition; (6) as containing objects of inner perception which are regarded as composed of representative images (ideas).

In this phase of evolution the apperceptive mass which mediates the Ego-consciousness has as its core, round which all other determinations are grouped, the presentation of the body as a thing in space. We have now to consider the process by which the body-complex recedes gradually into the background, until finally a philosophic concept of the Ego is possible, in which it plays no part at all.

In the first place, the susceptibility of the subject for sensations so familiar as those usually occasioned by his own body becomes very small, unless under exceptional conditions. On the other hand, the total system of representations, which is at the outset regarded as localised in the bodily organism, grows immensely as experience advances, both in extent and inner organisation. The use of language has a great influence in promoting this result. Through language the absent in space and the past in time are recalled with a vividness often sufficient to obscure present sensations. The vivid recall of presentations of the past is of special importance. As one event after another is revived by a succession of appropriate words, they tend to combine with each other more and more completely in a single unbroken time-series, embracing the history of the individual as a whole. If, now, a man is able in this manner to recall a portion of his own history, during which his body has suffered important change in size, form or otherwise, the body-complex to that extent acquires conflicting characters which obscure each other. To that extent, therefore, it ceases to form part of the Ego-complex.

§ 37. *The Ego-consciousness disengaged from the Body-complex.* Even in this modified form the body-complex must cease to be an integral part of the Ego-complex. As the mental system grows in extent and in organisation, the importance of external perception becomes less and that of inner perception becomes greater. Moreover, inner perception ceases to depend, as originally it did, on any reference to the body even as a repository of representative images. The concepts of psychological relations come into being and act as apperceptive masses, mediating the apprehension of the categories of inner perception—*e.g.*, willing, thinking, perceiving, &c. Hence, in the retrospect of his past history the individual recalls many phases of his conscious life in which the presentation of the bodily organism plays no

appreciable part. Now, when the body-complex thus ceases to be a constituent of the permanent mass which mediates the Ego-consciousness, what is there to take its place? What presentation-group can function in the later stages of mental evolution as the body-complex does in the earlier? The masses on which the categories of inner perception depend are more permanent and comprehensive than any others to which we have hitherto referred. But even these do not satisfy the required conditions. They are not capable of being co-appercipient in all apperceptions. We are not always merely willing, or merely perceiving, or merely thinking, or merely feeling. The apperceptive mass which shall enable us to say with clear consciousness of our meaning, '*I* will,' '*I* perceive,' '*I* think,' '*I* feel,' must be one in which the distinctive features which differentiate willing, perceiving, thinking and feeling are obscured, leaving in relative dominance some character common to all of them. Now this ultimate characteristic can be nothing else but psychological relation in general; *i.e.*, the inter-connexion of presentations which is implied in their union in one consciousness. The specific qualities of the presentations are indifferent. The specific forms of their combination are indifferent. These may change from moment to moment, while the Ego-consciousness remains the same. So far as the all-embracing group thus constituted comes into play in apperceptive processes, the original unity of consciousness becomes an object of consciousness. When this happens we are aware of that which the word 'I' signifies for the developed consciousness. The nature of the apperceived presentation may, and does, vary indefinitely. The Ego perceived may be the Ego willing or the Ego feeling; the objects of volition, knowing and feeling change incessantly. Some one or other of these determinations must be present if the Ego is to be an object of consciousness at all; but none of them can be regarded as essential. The object of self-consciousness is in fact a complex in which each and all of the constituent parts can be dispensed with, so long as there are others to take their place; *i.e.*, so long as the unity is preserved for which it can be called a complex at all.

§ 38. *The Ego as an Indivisible Real Being.* By a process analogous to that which leads us to refer the attributes of a sensible thing to a single substance in which they are somehow united, we come also to regard the Ego as a simple real being, distinct from the specific determinations which it assumes from moment to moment in endless vicissitude. The complex which constitutes the presentation of a physical

thing is primarily apprehended as a distinctionless unity. When by a series of judgments it has been analysed into a plurality of qualities, the tendency to regard it as a unity still persists. The unity which we are unable to find in the complex itself is posited as a substance on which the complex depends. In like manner the unity of the Ego cannot be identified with all or any of the multiplex and mutable phases in which it is presented. Hence we are driven to posit a simple substance to which they are all referred. This is what is called the soul. But if we push our inquiry further and ask how and when we perceive this simple and permanent substance, we discover that we do not perceive it at all, but only assume it.

§ 39. *The Ego as Self-determined, and especially as Self-known.* Selfhood is a characteristic which is very far from being confined to the Ego. There is not only a myself, but a thyself, a himself and an itself. The water forces a way for itself; fire burns itself out; a germ develops itself. Before we can profitably discuss the self-determination of the Ego, we must first investigate the general meaning of the word 'self' as it is used in instances such as these. Now in all cases in which we thus speak of a thing acting on itself, it will be found that a re-entrant series of changes is involved. The thing initiates a train of events which also terminates in it. The water flows in a deeper bed than before. The deepening of the bed is viewed as due to the action of the same water which flows in it. Psychologically, the perception of such a process may be thus represented. Suppose a complex $a\mathrm{A}a$ to be presented, and let the series abc evolve itself. Suppose, further, that a second series $c\beta a'$ is reproduced by the evolution of abc. By reason of the similarity of a' with a, they will fuse, and the whole complex $a\mathrm{A}a$, in which the process originated, will be raised and maintained in consciousness. This psychological movement would proceed in a perpetual cycle were it not for interference from other presentations. Cases of this kind, in which homogeneous elements forming the starting point and the termination of the same or of connected series meet in consciousness, fuse with each other and emerge with united force, may be repeated indefinitely in the course of a varied experience. By this means a concept of self-determination is generated; the general form of process is alone dominant, all else being comparatively obscured. Particular instances of self-determination become recognised as such, when they are apperceived by this formal concept. Selfhood is therefore a category in the Herbartian sense.

Now the concept of self-determination is perpetually called into play in the apperception of processes both within the Ego-complex proper, and within the body-complex, which does duty for it in the earlier stages of mental development. Every purposive action ends in the satisfaction or the disappointment of the desire in which it originates. The Ego which wills is the same Ego which is satisfied; therefore in willing the Ego finds itself. An animal seeks food, and the same animal enjoys the food. A man moves hand or foot, and the same man sees the movement. We represent our thoughts in words; the words in turn give us back our thoughts; and we say that we have expressed *ourselves*,—well or ill, as the case may be.

Recognition of the Ego as self-determined depends (1) on apperception by the Ego-complex, for without this the Ego would not be an object of consciousness at all; (2) on apperception by the general concept of self-determination. Thus self-determination is a category of inner perception, just as willing, feeling and judging are; and it stands in the same relation as they do to the supreme category which is expressed by the word 'I'.

To prevent misconception, it may be well to remark that those elements of the re-entrant series, which fuse and emerge with united strength, are, as parts of the psychological mechanism, only homogeneous, not identical. This is one of the innumerable instances, in which what is psychologically composite appears as a single object of consciousness.

In the light of the preceding discussion it is easy to show how the Ego appears to be its own object. In order that it may be an object of consciousness at all, apperception by the Ego-complex is necessary. This apperception may in its turn be apperceived by the same complex, and through the new apperception also the Ego becomes an object of consciousness. The two Ego-presentations fuse, and appear as one. Thus the identity of the 'I' as subject and the 'I' as object is a case of self-determination explicable in the same way as any other.

With this discussion of the Ego-consciousness, which Herbart rightly regarded as his crowning achievment, the exposition of his Psychology may aptly close. In another article, I propose to compare his method and results with those of contemporary English psychologists; noticing at the same time the work of Beneke, who was influenced both by Herbart and by English writers.

(To be continued.)

II.—ON WUNDT'S THEORY OF PSYCHIC SYNTHESIS IN VISION.

By J. H. Hyslop.

I MIGHT have announced as my subject the theory of 'psychic synthesis' in general, because Wundt regards the perception of space universally as a synthesis of motor and sensory experience; but I cannot at present consider it in more than one aspect, and therefore confine the discussion to some very interesting and complicated results in vision. The theory may be rendered more intelligible by a few facts which prove the defects in Helmholtz's theory of 'unconscious inferences'. Wundt's explanation was advanced very evidently to correct that of Helmholtz, and it will be seen that the phenomena which most distinctly indicate the weakness of the latter suggest very clearly the propriety of the former. Helmholtz seems to have been committed to the theory of 'unconscious inferences' by the problem which retinal impressions presented to investigation. These impressions represented only a *plane* image, as in the *camera obscura*, and yet perspective seemed to be as immediate to sight as if solidity were also represented in them. Here we have, by supposition, a representative of plane dimension in the impression, analogous to touch, while there was none for solid dimension. The easiest explanation of this real or apparent anomaly, as in the case of geometrical figures representing solid objects upon a plane, and of paintings or pictures representing perspective, seemed to be a resort to association and inference, or some mental function to interpret visual signs in their relation to certain muscular and tactual adjustments so as to produce contact. It is not necessary to enter into the details of this view. We require only enough of it before the mind to appreciate the force of a few experimental facts against it, which at the same time suggest and confirm, at least to some extent, the view of Wundt. Aside from the contradiction imported in the expression 'unconscious inference,' I take Helmholtz to mean that the perception of distance and magnitude is due to a mental, although an unconscious, interpretation of certain visual signs which do not express 'a pre-established harmony' between the external and the internal worlds. Whatever of association and inference there

may be in our total conception of space, that the visual perception of it is not wholly inferential, and that there are native functions of sight to produce it can be evinced, I hope, by a few experiments, partly representing very familiar phenomena, and partly calling attention to certain peculiarities which I have hitherto not seen mentioned.

Take two stereoscopic figures, as represented in Figs. 1 and 2. It is well known that stereoscopic combination in

Fig. 1.

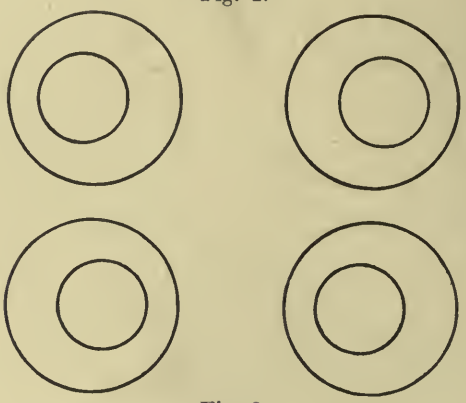


Fig. 2.

such cases produces the appearance of solidity, in this case the appearance of a frustum of a cone. But since fusion can be effected in several ways, we have a peculiar series of inversions in perspective to notice, which take place under such circumstances that their explanation by inferences of any kind seems out of the question. Now there are two general methods of effecting stereoscopic combination of such figures. These are by the unassisted eyes, and by the stereoscope; and each of them has two subordinate methods. With the unassisted eyes we may combine the circles, or their retinal images, by crossing the eyes; that is, by focusing them on some imaginary point between the nose and the sheet of paper upon which the circles stand. This is called *convergence*, and denotes the inward movement of both eyes at the same time. Again, we may effect combination by focusing the eyes upon an imaginary point beyond the sheet of paper. This I shall denominate *divergence*, for the sake of economy and contrast with the former term, although deliberately violating generally-established usage, which has limited the term to the outward movement of both eyes from the primary or parallel position. But I wish to take

into account certain neural and psychical processes which are connected with all outward movements of the eyes, and which are the opposite of those in convergence. Hence I shall speak of 'divergence' as any outward movement of the eyes from any given point, and generally from the plane in which the figures are situated for combination.

Now, if we combine the circles in Fig. 1 by convergence, the fused image will represent the frustum of a cone with the smaller base apparently nearer than the larger, each localised according to the degree of convergence required to effect combination, and as if there were two different points of fixation. But if we combine them by divergence—that is, by focusing beyond the sheet of paper—the relative position of the two bases is inverted, and the smaller seems farther off than the larger, and both localised beyond the plane of the real circles. In comparing these cases, the effects of convergence and divergence are the opposite of each other. Again, if we combine the circles in Fig. 2 by convergence, the larger base of the frustum appears nearer than the smaller, the relative position of the two bases being the reverse of that by convergence, and identical with that by divergence in Fig. 1. But the two bases together appear nearer than the plane of the real circles. On the other hand, if we effect combination by divergence, the larger base seems farther off than the smaller, the reverse of convergence. Also again, the relative position of the two bases is the reverse of that produced by divergence, and identical with that by convergence, in Fig. 1. To compare them in general, combination and localisation by convergence in Fig. 1 is the inverse of that by divergence in the same figure, the inverse of convergence in Fig. 2, and identical with that of divergence in this latter. So with combination and localisation by divergence in Fig. 1. It is the inverse of convergence in the same figure, the inverse of divergence in Fig. 2, and identical with that of convergence in this latter. Or, in a still more general way, the effects of combination by convergence and divergence in the same figure are the opposite of each other in respect to localisation and perspective, but in different figures are identical with each other. That is, convergence is always opposed to divergence in the same figures, but opposed to convergence in different figures. So divergence is opposed to convergence in the same figures, but opposed to divergence in different figures.

These comparisons and contrasts can be carried still farther. If we leave combination by the unassisted eyes

and employ the stereoscope to effect it, in Fig. 1 the relative position of the two bases will be the reverse of that by ordinary convergence, and identical with that which is effected by divergence. In Fig. 2 the same inversion takes place of the effects produced by unassisted convergence and divergence. Thus combination by the stereoscope in Fig. 1 makes the smaller base of the frustum appear the more remote of the two; in Fig. 2 the nearer of the two; the reverse of unassisted convergence, and identical with unassisted divergence in both cases. The explanation of this will be evident after further discussion and analysis. At present we are concerned only with certain facts and regular variations of phenomenal effect. Once more, we can multiply the effects and contrasts already described. If we reverse the lenses in an ordinary stereoscope, and place slides in front of them so as to cut off the images from the same sides, but to admit those from opposite sides, the effect of combination and localisation will be the reverse of that by the ordinary stereoscope, and the same as unassisted convergence. It will be clear to everyone that something more than inference is required to explain such phenomena. The effects of combination correspond too regularly with sensory and motor processes to be the result of inference alone.

To understand why motor innervation may be introduced to explain localisation at the points of fixation, and the inversion of perspective in the bases of the frustum according as we change the method of combination, we may notice an important law regulating the occurrence of these effects and conforming to the adjustments for normal vision in the perception of single objects. To ascertain this general law, we have only to remark the relation sustained by the various circles to the median vertical, and the corresponding degree of adjustment required to effect combination. Now the farther apart from each other any two geometrical figures may be, the greater must be either the convergence or the divergence to effect fusion, which is accomplished by changing the point of fixation along the median line, the fused image appearing to be translocated to this point of fixation. In normal vision the convergence has to be increased for the perception of nearer and decreased for that of remoter objects, so that as a matter of fact localisation and the degree of adjustment correspond to each other. The same correspondence will be noticed in the phenomena we have described, and why it is so is evident from the following facts. Reckoning from the centres of the circles, in order to

simplify expression, in Fig. 1 the smaller circles are farther from the median line than the larger, and hence will require a correspondingly greater degree of adjustment, whether of convergence or divergence, to effect combination. In Fig. 2 the smaller circles are nearer the median line, and require a correspondingly less degree of ocular adjustment than the larger for combination. In Fig. 1, therefore, convergence being greater to combine the smaller than the larger circles, their localisation at or near the point of fixation for their fusion can readily be explained by the innervation for that adjustment. Hence the fused image of the smaller appears nearer than that of the larger circles. On the other hand, because of their greater distance from the median line, divergence being greater for the combination of the smaller than the larger circles, the localisation of the smaller base of the frustum at a greater distance than the larger, and at the point of fixation corresponding to the proper degree of adjustment, can easily be explained by the innervation for the opposite movement of the eyes as compared with convergence, and in accord with the processes of normal vision for lesser and greater distances. We see from this why the relative effects must be inversed in Fig. 2, where the smaller circles are *nearer* the median line than the larger.

Illustrations and experiments of this kind can be varied and multiplied indefinitely, and localisation will uniformly correspond to the degree of adjustment required to produce combination. The only condition to be fulfilled in each case is that the figures to be combined shall lie in the horizontal meridian, or in the same plane parallel with it, and representing different relations to the median line. To represent in the most general way the indefinite possibilities of experiments in this connexion, we may take the circles in

Fig. 3.

Fig. 3, with the vertical meridians AB and CD dividing them into the halves E, F, G and H. If all the figures

have either the same centre as the outside circle, or lie in the vertical meridians, solidity or relief does not appear as the result of stereoscopic combination, but all of them appear in the same plane, although the image as a whole may be translocated from its real position to the point of fixation. But if the smaller circles, lines, figures, &c., do not lie in the vertical meridian, and those in one circle are at a different distance from the median line as compared with those in the other circle, binocular relief at once assumes existence upon stereoscopic combination. If the figures or their centres lie in E and H, combination by convergence effects their translocation to a point nearer the observer than the larger circles, and when the fusion appears perfect to a point which is the point of fixation for that combination. Combination by divergence translocates them in the opposite direction to the point of fixation in the median line, farther off than that for the larger circles and corresponding to the degree of adjustment for their fusion. For all figures in F and G, and in the same horizontal plane, the perspective will be the reverse of the above for the same modes of combination. The important general principle, therefore, to be observed is, *that the localisation of stereoscopic figures corresponds exactly with the kind and degree of adjustment required to produce fusion.* Now, that this can hardly be the result of 'inference' will be manifest to anyone who has watched that process in the interpretation of ordinary experience. Inferences would hardly be under the control of innervation for ocular movements, especially as they are supposed only to be interpretations of visual signs in a plane image, and representing only the variations of light, shade and mathematical perspective in ordinary pictures. But that 'psychic synthesis' supplements the defects of such a view may not be so clear. This can be explained, however.

The 'psychic synthesis' referred to is supposed to be a combination of sensory and motor, or peripheral and conative sensations. By 'conative' we mean what Wundt calls 'innervation-sensations,' or sensations of effort. They are due to the innervation of motor apparatus, and although the very existence of such sensations, centrally derived, is denied by Prof. James and other writers, the fact of such an 'innervation' and its modifying influence upon the localising of images seem so well supported that the theory is entitled to scientific consideration. This is made very evident by its entire conformity to the principles of ordinary experience. Now, in the perception of distance, or the proper position of objects, we have to adjust the eyes in all

cases according to the distance of the object from us. The horopter, being the only line or surface of single vision, has to be transferred to a remoter position by the outward or divergent movement of the eyes in order to effect the combination of homonymous images, and to a nearer position by the inward or convergent movement in order to combine heteronymous images. Here we have the localisation of objects corresponding exactly with the point of fixation and degree of adjustment, which is a muscular process by supposition, required to effect single vision. Of course, the objection to supposing that localisation is here due to muscular and central innervation would always be that the effect might be due to the way in which different distances affected the sensorium, say in intensity of light, retinal magnitude, mathematical perspective, &c., and hence be accountable to inference or association. But the phenomena which I have described successfully eliminate all the factors that make the theory of inference a plausible one. They show figures without any real perspective and producing nothing but the effect of a plane image upon the retina, and yet the localisation of the different images corresponds exactly to the amount of muscular adjustment required to produce combination. The nearness of the smaller figures, not having the same centres as the larger, to the fovea centralis, or to corresponding points, stimulates the automatic tendency of the eyes to make those movements, convergent or divergent, which will effect real fusion, and hence the images are translocated to points which are the points of fixation for their combination. All real movements of the eyes have to be effected by muscular innervation ; and in these cases, since we cannot suppose any real motion to take place without separating one or the other set of images, we are left to explain the translocation and apparent fusion of all images outside the focus of attention by supposing them the effect of central innervation for the proper motion of the eyes, which is prevented from discharging itself into a real movement by the tension that holds the eyes in a given position. Now, there are many very interesting facts which confirm such a supposition, beside those I have given, and it is quite possible that they have had much to do in deciding Wundt's mind upon the question. He certainly, and justly, lays much stress upon the following important facts, which illustrate very clearly the influence of innervation for ocular movements that do not and cannot take place. I quote two passages which will explain themselves :

"The paralytic who tries to raise his entirely helpless leg has a very clear sensation of his exertion and expenditure of power; he entirely wants, however, all those elements of motor sensations which have their source in the contractions of the muscles, in the displacement and pressure of different portions of the skin, and he obtains by this means the conception that his expenditure of effort is resultless. But there is no reason in this fact to deny that he has a sensation of that effort. Further, where that movement is not entirely prevented, the disproportion between this effort and the real motion which it would normally excite leads to very singular illusions, which exactly correspond to certain above-mentioned normal illusions, only they are much more evident to consciousness and require to be gradually corrected by experience. The subject of paresis is deceived in regard to the length of his steps, or the direction in which he moves his arm or hand, while at the same time his limb, in consequence of the intense effort to move it, seems, as it were, to be overcome by resistance. The most important of these phenomena are those in the case of the ocular muscles, because of the remarkable disturbances in localisation which have their effect here. For instance, one suffering from paresis of the right external muscle of the eye, where the muscle is still able by the utmost effort to effect a lateral movement of 20°, locates an object, which in reality is only 20° distant from the median plane, at a point as far outward as corresponds to the utmost outward movement of the normal eye, and, when asked to touch the object with his forefinger, places his finger far beyond it to the right. In all these cases it is evident that, along with motor sensations, there are others which do not depend upon the actual state of the muscular contractions, but upon the volitional impulse which produces this contraction, and which consequently must be of a central origin" (*Physiol. Psychologie*, i. 375).

And again, in speaking of the influence exercised by ocular movements upon the measuring of the visual field, he refers to the same phenomena in the following language:—

"A beautiful confirmation of this influence of motion is found in those changes which take place in the spatial localisation of visual objects in consequence of injury to particular muscles of the eye. If, for example, the external rectus, say from some injury, suddenly becomes ineffectual, there nevertheless remains a tendency to turn the eye outward occasionally; the effort applied to this, however, is without effect. We notice in such cases that the eye is able to turn in all other directions of the visual field, and perceives things in their right positions. But as soon as it endeavours to turn outward, an apparent motion of objects arises; these appear to move in the direction toward which the eye vainly makes its conative or innervation efforts. Evidently this originates from the fact that the patient believes the eye to be moving, although it is quite still. But when a normal eye, which is moved toward the right, at the same time sees the same objects, they must of course be moving with it toward the right; the injured eye, therefore, objectifies its motor tendencies, and, although standing still, objects appear to move. If the external rectus is not completely disabled, the eye can, indeed, fixate an object lying at the right, but it requires for this purpose a much greater muscular effort. Accordingly the object appears to be located farther to the right than it really is. If the patient attempts to grasp it, he grasps beyond its real position. These phenomena prove that the localisation of an object in space is determined

essentially by the *innervation*-sensation which accompanies that impulse to movement" (*Ib.* ii. 91).

In the same way he explains numerous illusions noticeable in normal vision; such as *geometrico-optical* illusions. They are said to comprehend two classes which we need not mention here, though attention may be drawn to his extended and interesting discussion of them.

The importance of these facts which Wundt reports is not to be exaggerated, and were it not that there is some confusion in his theory, which we shall consider below, they would require very careful analysis and further experiment to make them at all compatible with some other facts which we have also to present and discuss. But we are not done with facts and evidence that give his theory great advantages over perhaps all others. It will be clear to the student without further amplification how the conclusion defended in the passages taken from Wundt applies to the translocation of images in stereoscopic combination, and how extensive an application it has in binocular vision. With this in view I would present some corroborative facts, which will both exhibit the strength of the theory and point the way to the qualifications to be imposed upon it in the sequel. But before doing this I must mention briefly an important consideration to which we shall return later. It is the liability to complete misunderstanding which the terms 'innervation' and 'innervation-sensations' possess. The entire value of Wundt's theory, making space-perception a "psychic synthesis of peripheral and conative sensations," rests upon its generally assumed affiliation with the empirical and associational theories of Brown, Mill, Bain and others, who trace space-perception to *muscular and motor* phenomena. Indeed, Wundt borrowed his conception of 'psychic synthesis' (*Phys. Psych.*, ii. 28, 175) from Mill, who had already spoken of the process as a case of 'psychic chemistry,' the combination of the sensations of two or more senses, pre-eminently including the muscular sense. But Mill and his school have in mind the sensations of real and effected muscular movement. Wundt, on the other hand, when closely pushed, distinguishes between actual motor and conative or 'innervation' sensations; which latter are supposed to be neuro-psychically the same as the former, and so are connected with the *efferent* discharge, but do not really effect the movement of which they are regarded as the innervating equivalent. But in spite of this distinction, clearly announced several times, he keeps the two conceptions so nearly identical that his theory gets all the benefit

of those presumptions which are established in the conception of muscular movement. That is, the intimate connexion between muscular movements and their originating source in *efferent* processes, coupled with the fact that physiologists generally at present speak of the discharge upon the motor apparatus as 'a muscular innervation,' carries with it the impression that the perception of space, said to be due to 'innervation,' is a *muscular* phenomenon. Hence the view is welcomed by all those empiricists who are desirous of disproving all native functions in vision for perceiving the third dimension. Its nomenclature and associations affiliated it at once with the theory of the 'muscular sense'. That Wundt's position is understood, and is likely to be understood, as identifying 'innervation-sensations' with efferent discharges neuro-psychically, is clear from the way it is discussed by Dr. Ferrier in *Functions of the Brain* and by Prof. James in his memoir on "The Feeling of Effort". Assuming, therefore, at present for the sake of argument that 'innervation-sensations' are the same as *muscular*, and that they are attempted motor discharges, we may turn to some interesting phenomena which seem to confirm the theory.

In the first place, it must be remarked that the ocular movements connected with the single vision of objects at various distances are the outward and inward, or convergent and divergent, as we have defined them, those which take place in, or parallel to, the horizontal meridian, and not those which take place in the vertical meridian. Now, if the perception of space is a sensory and not a motor product, and if the tendency to fusion upon disparate points awakens muscular tension on the one hand and the perception of solidity on the other, we may ask why the latter phenomenon occurs only in the horizontal meridian, where the result coincides with the degree of muscular adjustment to effect fixation and combination. To illustrate this by experiment, take the following lines in Fig. 4, where the

Fig. 4.

lines b and b' are supposed to lie in the same planes, while a and a', and c and c' lie each in different planes. When we try stereoscopic combination, it is evident that a and a',

and c and c' must fall upon disparate points, but disparate as lying in different parts of the vertical meridian or parallels, and not in the horizontal meridians. At very small distances the fusion is as apparent here as in such figures as we have already described, and the effect is very evident in a kind of ocular strain, which a physiologist would at once recognise as due to the attempt of one eye to move downward and the other upward. But no translocation of images accompanies it. Notwithstanding the 'innervation' excited by the effort at fusion, the fused images of a and a', and c and c' remain in the same plane with b and b'. It is different, as we have seen, with any differently drawn lines in the vertical meridian and parallels. It would seem, then, that the perception of solidity coincides only with the muscular efforts in the lines of the horizontal meridian. If it were due to the *sensory* effort to produce fusion, the perception of space ought to occur in Fig. 4, as well as in the cases of Figs. 1 and 2. But the limitation of the perception of perspective in stereoscopic combination to the attempt at fusion only in the horizontal meridian and its parallels makes the process correspond to, or coincide with, the muscular innervation for adjustment in that plane. The inference would be that the result is efferent instead of afferent, muscular and motor instead of sensory, since it occurs only when the reaction involves the tendency to ocular adjustment in the horizontal meridian, and for different distances in the median line. The presumption, at least, would all be in favour of the process being motor and muscular.

But there is another set of phenomena which point in the same direction. I take the normal cases first. As we have seen, we must translocate the horopter for single vision of different objects in the third dimension, converging the eyes for heteronymous, and diverging them for homonymous images. The initiation and execution of every such movement must be effected by *attention*. If we wish to bring into clear vision an object lying nearer us in the median line than the point of fixation at any given position in that line we *turn the attention* to it. Immediately, and, as it were, automatically, the proper convergent movement of the eyes sets up, and will be effected unless a strong counteracting influence of the will occur to inhibit it. But where no such inhibition is voluntarily introduced, the change of attention from one point of fixation to another, or to some object lying in a nearer position, spontaneously contracts the internal or nasal, and relaxes the external or

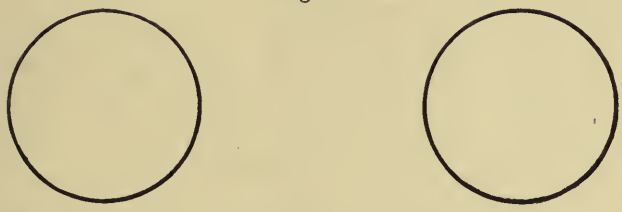
temporal muscles of the eyes, in order to converge them for fusion in the fovea. The same process, but the reverse movement, takes place for the fixation and fusion of homonymous images. Now, we have here a very intimate connexion between *attention* and the muscular and motor innervation of the ocular apparatus for adjustment. This connexion will be either reflex or voluntary. If it be reflex, muscular and motor phenomena are necessary factors in the total product, and render the supposition of 'psychic synthesis' quite reasonable. If, again, we consider it voluntary—that is, due to an act of will which sets reflex centres into operation—two prevalent doctrines may be put together to see what conclusion will follow. In the first place, Wundt, and, for that matter, all psychologists that we know of, maintain that an act of attention, or change of attention, involves an *act of will*. In the second place, Wundt and many psychologists, some who would accept his space-theory and some who would reject it, admit that the will and all volitional processes, even when terminating only in a mental choice, are very closely connected with the motor apparatus and more or less affect it in every case of the will's acting. Now, if attention involves an act of the will, it must liberate certain motor forces and check others when a change of fixation is effected, and thus involve the translocation of images according to the kind and degree of 'innervation' which it stimulates, thus connecting peripheral with conative sensations through the influence of the will.

That attention involves, really or apparently, an automatic motor tendency, is evident from the following experiment, which begins the illustrations from stereoscopic combination in this connexion, and is not included in the so-called normal cases above. Take two circles, each about one and a half inches in diameter, and draw two very small circles near the outer termini of the diameters, so that the figure will resemble Fig. 1 in form, but represent the inner circles at a relatively greater distance from the median line than in Fig. 1. This is to take a case where the fusion of the smaller will not be even apparently simultaneous with that of the larger, but where the effort at fusion is very distinct to consciousness in the partial translocation of the images. When we combine them either by convergence or divergence, the smaller circles will not appear to fuse while the attention is fixed upon the centre of the larger, marked by a small dot, if we choose; but if we turn the attention to the smaller circles, and exercise no inhibitory influence

upon ocular movements, there will be no means of preventing the actual fusion of the smaller circles, attention relaxing the muscular 'innervation' for that adjustment which had combined the larger circles, and stimulating that which effects the fusion of the smaller. The larger now appear to be separated. Every other change of attention will produce a corresponding effect, showing the way in which motor and sensory phenomena seem to be necessarily complicated.

A still more interesting experiment of my own indicates the same principles at work. How far the same result can be reached by others I will not undertake to affirm. It is so confirmatory of the position above taken, and coincides so perfectly with what might be expected from what we know of the normal changes of attention, that it is worthy of some emphasis and comment. Take two circles, as in Fig. 5, and combine them by convergence. The well-

Fig. 5.



known results are: (1) that three circles will appear in the field of vision, the centre one the result of fusion; (2) that the centre circle will appear nearer the observer than the sheet of paper upon which the two are drawn; and (3) that the apparent *locus* of the central circle nearer the observer can be proved or tested by at once placing a pencil at the point where the circle appears, and this point turns out to be the point of fixation for combination, since only at this position will the pencil appear single. At any other point outside the horopteral line passing through this point, its images become homonymous or heteronymous according to their place within or beyond that line. In my own case I also always notice that the central circle seems both nearer and smaller than the exterior circles. If we combine by divergence, or focusing beyond the sheet of paper, the localisation and magnitude of the central circle is the inverse of those in convergence. These I do not lay any stress upon, although they coincide exactly with the kind and degree of adjustment existing at the time.

But take now the instance of combination by convergence.

Here I have said that a pencil can be at once put at the apparent position of the central circle, so that the pencil and the circle will appear in the same plane. Instead of a pencil, or rod of any great thickness, take a piece of wire, a knife-blade, or a needle, so that double images of it will be more readily visible. The wire will appear single at the point of fixation. But move it beyond, and it appears double and at a greater distance than the circle. This, of course, is as it should be: the images become homonymous. That they are homonymous can be proved by suddenly opening and closing one of the eyes, the ordinary test. But now the anomaly appears. If we keep the convergence of the eyes perfectly fixed for the combination of the two circles to form the central one, and turn the *attention* to the two homonymous images of the wire, and without allowing convergence to change so as to combine those images, we shall find that they will instantaneously spring into the *position of heteronymous* images, without in the least approaching each other. That is, they appear nearer the observer than the central circle, beyond which they had seemed the moment before. That the images are really *homonymous* can be proved in the ordinary way, by closing one eye and observing that it is the image on the same side that vanishes. At certain distances from the point of fixation, rivalry often takes place between the homonymous and the heteronymous positions, and the two images will alternately seem nearer and farther off than the central circle.

A beautiful way of determining the same result is to place the wire upon the sheet of paper, and coinciding with any point in the circumference of one of the circles, but held vertically, while convergent combination is effected. If the attention is fixed strongly upon the two images of the wire they will be seen to coincide with the plane of the paper, and the central circle will appear in the same plane as the two exterior circles. This may vary, however, with rivalry, as experience may show. But generally the two images of the wire appear to coincide with the plane of the central and one of the outer circles. Now, if we begin to move the wire toward the real point of fixation nearer ourselves, without altering this adjustment, and without changing the attention, the two images of the wire will appear nearer than the central circle, and also to approach us until they reach a certain point, where the attention is nearly the same as that for the fusion of the circles, and here they instantaneously assume the homonymous position, having appeared heteronymously situated until this point was reached. The sudden and

anomalous character of the phenomenon impresses consciousness at the time with a marked feeling of surprise. The movement of the wire can be reversed, and the same phenomena will occur but in the inverse order. If, again, we draw the circles upon a piece of glass in order to combine them by divergence, or fixation beyond the plane in which they are situated, we shall observe similar effects as before, only the change this time is from heteronymous images into apparently homonymous images. If, after combining the circles by fixating beyond them, we hold the wire nearer the plate of glass than the point of fixation for fusion, its images are double and heteronymous, as can be tested in the ordinary way. Now, by turning the attention to these images without allowing the ocular adjustment to change, they will as suddenly as before assume the *homonymous* position: that is, appear beyond the central and fused circle. Of course they are only relatively homonymous, as the usual test will show, the localisation of the central circle being transferred from the point of fixation to the plane of the original circles, or nearer it than the focus of vision. Caution must be observed in this part of the experiment to see that the wire is really within the point of fixation, because the very attention that is employed to see that it is not in the same plane as the fused circle translocates this latter, and we may not easily get the effect. The wire may appear beyond it all the time and thus seem relatively or absolutely homonymous when its images are really heteronymous. But if the proper tests are applied the effect as described is very readily obtained. Further, it is an important confirmation of all this, that the really heteronymous images of convergence, when the wire is held nearer the observer than the point of fixation, and the really homonymous images of divergence, when the wire is held beyond the point of fixation, are never translocated into the apparently and relatively opposite position. Now for the explanation.

At first sight, the phenomena appear to be an anomaly in localisation, and to confound almost any theory endeavouring to account for it. But if we revert to the influence of attention in all sensory processes, we may discover a cause for the effects just described. Thus, it is known that we may so absorb our attention upon an object as to be unconscious of a severe pain in the tactual sense. The law of Kant and Hamilton, that "sensation and perception are in an inverse ratio to each other," is the most general statement of this relation between the direct and the indirect field of consciousness. In vision, we may be so occupied

with a particular object as to disregard the presence or approach of another. We may even lose entire sight of all objects except the one in which we are interested. Further, it is a universal fact, as above intimated, that attention directed to any object in the field of view, and when not inhibited by voluntary restraint, at once and automatically sets the eyes into the proper movement or movements for adjustment to produce single vision. At the same time the visual tension of the eyes is relaxed for the object from which the attention is turned. Now turn to the experiments and apply the results of these facts. When we keep the adjustment of the eyes for combination constant, but direct the attention to the homonymous images of convergence and the heteronymous images of divergence, the tension, or 'innervation' for binocular localisation is relaxed by the change, and we are left to monocular influences for the localisation of the images of the wire as well as the several circles, and they appear accordingly in the proper space-relations for monocular vision. We need not carry this into its details and special tests to show that monocular triumphs over binocular vision. It suffices for present purposes to observe that attention controls the 'innervation' for localisation, no matter how we choose to regard its relation to the motor and muscular system. But when we assume, as stated, that attention involves will and that the will is closely connected with the motor apparatus, these phenomena point very significantly to the conclusion drawn in both of the quotations from Wundt. This intimate connexion between attention and motor processes may be illustrated by an experiment which I have often tried, and which is only another form of those already just

Fig. 6.

described. Take two circles, as in Fig. 6, and draw the smaller circles so that they are beyond the limits of combination simultaneously with that of the larger; also place

dots at the centres of the larger circles. Now, if we combine by convergence in ordinary circumstances, there will be a tendency for the smaller circles to combine, and, although their fusion cannot be actually effected without breaking that of the larger, they appear localised nearer than the plane of the larger circle. But after practice has made the experimenter skilful in managing his eyes, if the attention is intensely fixed upon the fusion of the larger circles, the smaller ones will suddenly recede into a position apparently beyond the plane of the larger, showing the prevalence of monocular principles again. On the other hand, if we combine by fixating beyond the paper, the concentration of attention upon the larger circles leaves the smaller to appear nearer the observer, contrary to the rule we have laid down about their relation to the median line in comparison with the others. But now, if we concentrate the attention upon the smaller circles, they spring at once into a position apparently beyond the larger, to accord with the kind of adjustment required for their combination. Attention here again translocates the images of the two circles. But the most important phenomenon to be noticed in both cases, namely, combination by convergence and divergence, is the tendency of the two smaller circles to approach or recede from each other laterally according as binocular 'innervation' is induced or relaxed. In the first case, that of combination by convergence, when attention to the smaller circles, without changing the adjustment, translocates them to positions apparently nearer than the larger circles, they seem nearer each other laterally than when the concentration of attention upon the fusion of the larger circles translocates them to the monocular position beyond the latter. They are distinctly observed to move apart from each other in such cases, and to approach as they are retranslocated back to the binocular position. In the case of combination by divergence, as defined, the same lateral movements of the smaller circles are observed to accompany the changes of localisation. Now, we have here quite indisputable evidence of an intimate, if not an automatic and necessary connexion between *attention and the motor or muscular apparatus*. Attention, will and motor processes seem to be correlates and necessary concomitants of each other. Localisation is shown to vary with them, while the position of retinal images is supposed to remain unchanged, and hence the natural inference is that the conception of space so involved is the product of this 'innervation' which is denominated 'central and motor,' and

is not regarded as *sensory*. The peripheral impression remaining the same, the fact that localisation in the third dimension coincides and varies with the 'innervation,' which is the psychical equivalent of so much muscular and motor activity, gives much probability to the theory of 'psychic synthesis,' as will be evident to those who have followed the course of speculation. The facts which have been adduced cover a very large and comprehensive field, and have importance in proportion to that and not to the number presented. Their force will be left to the appreciation of the reader without further comment.

We proceed next to criticism and to the objections against this theory. But before beginning these it is well to remark that the above facts, which are made to do service for the theory of Wundt, will also be made the source of an analysis of the problem which shows that the theory of 'psychic synthesis' is not clear and accurate in its conception of the case, and if consistently carried out must be reduced to a *sensory*, not a *motor* process, to an *afferent*, not an *efferent* class of sensations. The criticism of the theory will be conducted in two different ways. In the first we shall state the objections to it which may be made upon the supposition that these 'innervation-feelings' of Wundt's are identical with those accompanying a motor discharge and its muscular contraction, and that the 'innervation'-process is identical with what has all along been spoken of by physiologists as 'muscular innervation'. In the second we shall point out an analysis of the problem, as the result of the first class of objections, and as actually stated by Wundt, which very greatly compromises his theory, and which weakens its integrity to the extent that it can present no antithesis and no contradiction to those who, like Dr. Ferrier and Prof. James, limit space-perception to sensory processes.

The theory has lately been criticised by Prof. James in MIND, and in his memoir "On the Feeling of Effort" (1880).[1] Some valuable facts against it are presented in the phenomena of "joint-pressure" (MIND xii. 197). But I shall be content with the reference to this criticism, and shall confine myself to objections which I have not seen noticed. This will save space and time.

The first objection to Wundt's view, at least as it is

[1] "Anniversary Memoir of the Boston Society of Natural History for 1880" (cp. MIND v. 582).

usually conceived by himself as well as others, has only *ad hominem* force. Assuming that this 'innervation,' which gives rise to the sensations of that name, is identical with muscular and motor innervation in its nature, we may present something of a dilemma, or at least an alternative between his theory of space-perception and his theory of combination upon disparate points. The two will not harmonise well, according the ordinary facts of vision on the one hand and the least expenditure of energy on the other. For instance, adjustment is necessary only to accommodate visual reactions to the law of corresponding points. To adjust the eyes for fusion upon these points muscular innervation is required, and this is stimulated by directing attention to homonymous and heteronymous images, which are such for the very reason that fusion does not exist upon disparate points, at least at any distance apart. It is the necessity of bringing them to corresponding points that requires the co-operation of muscular and motor processes. Now, Wundt holds with Wheatstone that fusion can take place upon disparate points. If this be the case, and if solidity be traceable to this, as Wheatstone supposed, the 'innervation,' which is the effort to bring them to corresponding points, and the equivalent of muscular energy, is an entirely supererogatory process. Yet it is as noticeable in these cases as in any other. In all ordinary cases of homonymous and heteronymous images, muscular and motor adjustment are mediated by 'innervation' for the express purpose of conforming to the law mentioned. But in fusion upon disparate points we virtually assume that the same result is attainable without necessitating a shift of the images to corresponding points. This would make the motor innervation a disturbing instead of a normal factor. Hence I urge that one or the other of the two views be abandoned. The theory of fusion upon disparate points must be sacrificed to 'psychic synthesis,' or *vice versâ*.

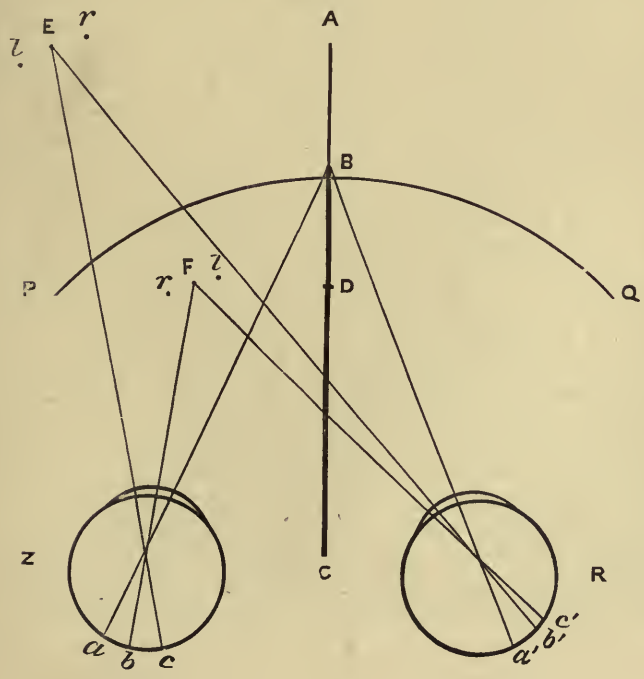
The second objection to the theory is based upon the anomalous and complicated character of the muscular processes and 'innervation' which it assumes in connexion with the various ocular movements. In this we may eliminate from consideration the *oblique* muscles, and discuss only those which mediate the vertical and the horizontal movements of the eyes. In the experiment presented by Fig. 4, we learned that the attempt to effect fusion upon disparate points lying in the vertical meridian, or lines parallel to it, although acting upon the superior and inferior muscles in much the same way as when the impressions

stimulated horizontal movement, never produces a translocation of images in the third dimension. We found this effect limited to the internal and external muscles. In such a case we are obliged to suppose a radical and generic difference between the two kinds of 'innervation,' if Wundt's theory is to hold together. In one, the muscular 'innervation' and contraction produces no perception of solidity; in the other, although they effect the same kind of mechanical motion, the perception of the third dimension is their concomitant. It cannot be the same kind of 'innervation' with the internal and external as with the superior and inferior muscles, because there is a distinct increment in the total effect. But to suppose this distinct kind of 'innervation' is only to exclude the ordinary muscular effort and sensations from the problem, by which the theory derived all its probability as an empirical account of the matter, and sets up a nervous function which is only another name for the process denominated 'Intuition' (*Anschauung*) by older speculators. Besides, it implies certain constitutional differences, which amount to a very singular anomaly between the processes which mediate the vertical and the horizontal movements of the eyes; so that one set of muscles must be endowed with very different functions, as motor apparatus, compared with the others. But the anomaly becomes much more incredible when we compare the two different forms of horizontal movements. These are the *parallel* and *convergent* movements, omitting the parallel movements in the vertical meridian. Now, the convergent movements are mediated by the internal recti muscles acting simultaneously and symmetrically; we might speak of divergent movements under a similar control from the external recti muscles, but this can be omitted, although it is assumed, in our discussion. The parallel movements are mediated by the simultaneous and symmetrical contraction of an external muscle in one eye and the internal muscle of the other, while there is a corresponding relaxation of the complementary recti muscles. That is, we have the parallel and convergent movements effected by the same muscles, the same mechanical contractions, and, presumably, by the same kind of muscular 'innervation,' the difference between the movements being determined only by the variations in the points of discharge and application. Now, on this supposition, when a parallel movement of 20°, say to the left, is made, the internal rectus of the right eye is 'innervated' to the same extent and in the same way as in convergence for the same number of degrees. But trans-

location of images in the third dimension accompanies only the convergent movements, while paretic disturbance occasions translocation in plane dimension with parallel movements. This last will not occur in normal vision. But the failure of 'innervation' upon a rectus muscle in parallel movements to produce the same effect as its 'innervation' to the same extent and of the same character in convergent movements, would require us to set up two distinct kinds of muscular innervation for the same muscles—one which produces spatial distinctions and one which does not. This, again, is more preposterous than the former case, and instead of relegating space-perceptions, as the author wishes it to do, to ordinary muscular effort, only sets up a specific function for this process, as the nativists would desire. Too many muscular processes are here involved to give the theory any such simplicity as it intends to claim. Such complications, also, of different kinds of 'innervation' violate all the analogies of physiology.

The third objection is based upon certain anomalous consequences of the theory involved in the localisation of homonymous and heteronymous images. This can be shown by Fig. 7. ABC represents the median line, B the

Fig. 7.

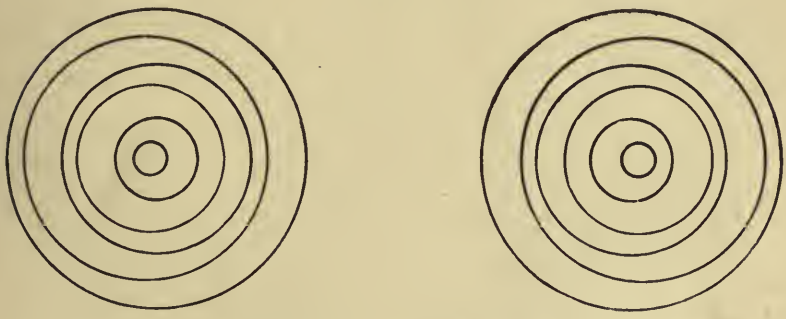


point of fixation, PBQ the horopter, E and F the points from which the impressions originate for the homonymous images *l* and *r*, and the heteronymous images *r* and *l*, marked by dots for their position, *a* and *a'* represent the foveæ of the two eyes receiving the images of the object from the point of fixation at B, *b* and *c'* the points upon which the images of F fall, and *c* and *b'* the points upon which the images of E fall. Now, according to the accepted laws of vision, E and F can be seen single only in the horopter. Hence, a convergent movement will be required to bring the heteronymous images of F into the horopter, and an opposite movement to bring the homonymous images of E into it. Since their localisation within and without the horopter, while the fixation is at B, coincides with the kind of adjustment for combination, and since the theory of 'psychic synthesis' makes this localisation depend upon the 'innervation' corresponding to that adjustment, there must be *two opposite states of 'innervation'* acting upon the same muscles at the same time, one to produce the convergent and the other the divergent movement of the eyes. One is a tendency to contract the internal and to relax the external muscles; the other, to contract the external and to relax the internal muscles. This is all the more singular when we observe that both the homonymous and the heteronymous images fall upon *corresponding* halves of the retina. If the objects were situated in the median plane, or line, as at A and D, such an opposition between the two tendencies might appear to present less difficulty. For the homonymous images of A would be intrafoveal, and the heteronymous images of D extrafoveal; in both cases they would fall upon *non-corresponding* halves of the retina, and might very naturally stimulate automatic and opposite efforts toward the fovea for fusion. But it is not so with the images of E and F. They fall upon corresponding halves, and it is not easy to see how, upon motor principles, those at *b* and *c'* should stimulate convergent 'innervation,' and those at *c* and *b'* the opposite tendency. But granting that this is no more explicable by the *sensory* than the *motor* theory, it is absolutely anomalous to suppose, as the theory of 'psychic synthesis' must suppose, that two antagonistic states of muscular innervation can exist at the same time (for Dove's experiment shows that they are instantaneous and simultaneous, and not successive), without contravening each other's influence for localisation. It is a contradiction of the law of impenetrability. Of course this opposition has to be admitted as a fact upon any theory; but what I am

intent upon intimating here is, that it cannot be muscular. Two opposite muscular innervations either result in *zero* for effect, or produce only one, which is the difference between them and their intensities. The physiology of the motor system does not show that opposite muscular innervations, contraction and relaxation at the same time and upon the same muscles, produce the effects of both of them. Hence the localisation of homonymous and heteronymous images generally stands in the way of this theory, because it is forced to assume such anomalous muscular processes, or to make such a distinction between different kinds of 'innervation' as completely removes the antithesis between this and the sensory theory of Prof. James.

The complications of these simultaneous and opposite states of 'innervation' can be very beautifully illustrated by a series of concentric circles, where succeeding sets are differently related to the median line from the preceding sets. This is shown by Fig. 8. In this combination,

Fig. 8.



convergence or divergence (as we have defined this) produces as many differences of position in the third dimension as there are differences of relation to the median line between successive sets of circles, and we must have, according to the theory, as many corresponding 'innervation-sensations' representing as many opposite efforts at muscular adjustment. Such experiments could be multiplied indefinitely, and only increase the improbability that opposite states of 'innervation,' as here assumed, are anything like the ordinary motor and muscular processes.

A fourth objection comes from the fact that monocular vision may overcome binocular influences without removing localisation entirely, as might be required of the case if it were due only to binocular efforts at adjustment—which

must be muscular and motor. The ultimate dependence of the problem upon monocular phenomena is demonstrated by the projection and localisation of homonymous and heteronymous images; by those experiments which show the supremacy of monocular influences, such as the fusion of images reflected from figures lying at an inclination, say of 45°, to the median plane; and by the monocular inversion of perspective, as in cases of geometrical outlines representing solid objects. I see no reason in monocular vision to make the process a muscular one, or in any way allied to it. Moreover, in the very experiments, represented in Figs. 5 and 6, to confirm the Wundtian hypothesis, there is a fundamental fact which cannot be reconciled with the supposition of muscular and motor innervation. It is, as shown, that localisation varied with the *changes of attention*, while the *muscular innervation and contraction for adjustment remain constant*. We saw the point of fixation and fusion to remain unchanged, so that there could be no changes of muscular effort, and yet the changes of attention affected localisation, or the relative localisation in the third dimension only, of images in the visual field, precisely in the ratio of such effort. But it could not be any actual discharge upon the motor apparatus, and hence has to be distinguished from it as a *sui generis* neural or psychical process.

This last fact brings us to the second part of our criticism, where we are to more distinctly recognise the author's real conception of 'innervation,' and his actual separation of it from muscular processes; the confusion of the two with each other being the source of most objections to 'psychic synthesis'. We have already indicated where the strength of the theory lies; namely, in its ability to avail itself of the conceptions and associations connected with muscular and motor phenomena, which involve the consciousness of space. The term 'innervation,' although at one time a general expression for any nervous activity that would produce a state of consciousness, came to represent, by the general consent of physiologists, the nervous discharge upon the muscular and motor apparatus. Now, Wundt's theory of space-perception was an effort to resolve that perception into data containing none of it (*Phys. Psych.*, ii. 28). He had, then, only to abstract muscular and motor sensations *per se*, and retain the 'innervation' supposed to mediate them, in order to satisfy the requirements of the case. If actual movements and the sensation of movement, which contain the conception of space, did not take place, but nevertheless the translocation of images did occur in the

precise ratio of the effort to localise them or combine them, there seemed every probability that the effect was due to the 'innervation,' which did not contain special data like sensations of motion, and which was only an inhibited discharge. Besides, its affinity with muscular innervation appeared in the fact that he called it 'central,' and it was generally agreed that motor processes were central. But in spite of this, when pushed to the wall, even in the crucial experiments upon which he relies for demonstration, he draws a clear line of distinction between the 'innervation' for muscular contraction and the 'innervation' which influences sensation and forms a part of the 'psychic synthesis'. At the close of the first passage quoted from him, he is forced to recognise that these 'innervation-sensations' do not depend upon the actual contraction of the muscles; for the latter remain in a constant and unchanged condition, while the former are variable. But he identifies them with a 'volitional impulse' (*Willensimpuls*), and, because this process is generally admitted to be central and closely related to the motor system, he can thus connect his process with muscular innervation. His own distinction and admission, however, are fatal to this. All sensations of effort that may be rightly called such make themselves evident upon the actual exertion of muscular innervation, and here we have the fact virtually admitted, for the 'innervation,' which effects translocation of images, is so distinct from the actual force applied to contraction of the muscles as to be held a mere 'volitional impulse' which does not necessarily instigate motor activity, and can never be more than the transition from purely sensory to motor processes, that is, never more than muscular innervation *in limine*. That it cannot be identical with innervation proper is proved by the fact that muscular innervation and contraction may remain constant and unconscious except for the peripheral sensations accompanying them, while this 'central innervation' varies. That it does not necessitate motor discharge is proved by the same fact, illustrated in the experiments of Figs. 5 and 6, where all the changes of attention and 'volitional impulse' there recorded left the condition of the muscles in this position for adjustment undisturbed. The apparent translocation of the homonymous images of the wire to the heteronymous position was due to the real translocation of the fused circle to the plane of the sheet of paper, or the point of monocular localisation, while the muscular adjustment and innervation of the eyes remained absolutely fixed and unchanged. Wundt himself, as we

have seen, is finally compelled to take this fact into account, and only escapes the abandonment of his theory by retaining the *central* origin of his 'innervation' for localisation, in contrast with the assumed *peripheral* origin of other sensations than the conative, while he separates the muscular and motor processes from the 'volitional impulse,' which is unquestionably in close relation to them and can at any moment discharge itself into executive effort. But the fact that this 'innervation' is central, and that it has close affinities with motor phenomena, if only in the form of attention and localisation in precise conformity to motor effects that might take place, does no more than prove a pre-established harmony between the several functions of the organism, and not the identity of one with another.

This view of the case can be enforced from the other side of the theory; namely, the contrast between *central* and *peripheral* sensations. We have already remarked that the theory of 'psychic synthesis' has gained much of its support and allegiance from its use of this distinction which has everywhere been supposed to coincide with that between sensory and motor processes, and could thus avail itself of analogies in supposed muscular experience to remove space-perception from the sphere of sensory phenomena alone. But it has entirely escaped the attention of its advocates that the supposition of 'innervation-sensations,' distinct from the sensation of actual muscular effort on the one hand, and presumably from the ordinary sensory states on the other, is either a contradiction, or dispenses with the distinction between central and peripheral altogether in reference to states of consciousness. For, it ought to be seen that what is gained by calling them 'central' is lost by calling them 'sensations'. The distinction between sensory and motor functions is entirely abandoned if both have sensorial qualities, and unless we apply 'sensation,' with Lewes, to denote the unconscious nervous process that begins at the periphery on the occasion of a stimulus, peripheral and central sensations may be identical. As a matter of fact, I believe that it can be made out that the sensations which Wundt characterises as 'peripheral,' are quite as 'central' in their origin as his so-called 'innervation-sensations'. For example, take the case of amputated limbs, which are distinctly felt for years afterwards; or the better-known fact, that a sensation does not occur at the same instant as contact with the object, but awaits communication with the nervous centres. If the connexion with the centre is severed, the peripheral stimulus

is not felt, although stimulus of the unsevered portion of the nerve may create that sensation, *and its localisation be assigned to the periphery.* Wundt ought to have seen here the consequences of his doctrine of 'local signs,' which he adopts in its essential features from Lotze. This makes localisation not a matter of peripheral functions alone, but a central process which takes into account the various shades of quality and intensity in sensations. The projection of the sensations into a lost limb seems to confirm this. But I will not urge the point. Further, the fact that every form of consciousness seems to involve attention, and attention to involve will, by general consent, would require us to assign them all the same origin, either central or peripheral. Wundt's confusion grows out of the ambiguity that pervades the use of the term 'sensation': now used as identical with *impression*, which is peripheral and is generally meant to include the unconscious nervous activity which mediates its communication with the central system; and now used as a *conscious state*, the mind's reaction against the impression, which so far as it is a conscious phenomenon is an act of attention, more or less, and so connected with will, which by supposition is a central function. This development of the case will make the so-called peripheral sensations central, and the theory will lose half its value in having to abandon its distinction between the two. All states of consciousness have an integrity and a unity of origin which abstract and arbitrary distinctions between central and peripheral genesis only seek to conceal. Hence, with every reason to ascribe a similar origin to all sensations, and the exclusion of 'innervation-sensations' from those of actual muscular contraction and the neural process mediating this act, we may safely dismiss the right of 'psychic synthesis' either to ally itself with the muscular theories which serve some empiricists so well against nativism in sight on the one hand and the *ideal* conception of space on the other, or to consider the synthetic process of space-perception as in any respect different from all other syntheses of consciousness.

No injustice is here intended against Wundt's theory. It has, to my mind, the merit of having better conceived the facts of space-perception than any other view. It is quite certain that Wundt has very successfully hit upon a process to account for localisation (if not for the more general conception of space), which enables us to distinguish very clearly between the function of colour-perception on the one hand and 'unconscious inference' on the other, although not

excluding the operation of interpretative influences in the total of our experience. Besides, the position forces upon psychology the recognition of a complete continuity between all the processes that begin with sensational consciousness and terminate in the realisation of some executive result. This continuity, however, is rather one of nicely adapted connexions than of psychologically similar products. It is for this reason that I demur to his identification of his 'central innervation' with muscular and motor innervation undischarged. Such identity cannot be maintained, and it is by Wundt himself upon special emergencies virtually abandoned. The single fact that attention, and even desire and choice, may be effected without any necessary change in muscular tension proves a difference between these so-called 'central' states and motor effects. It is true that the relation is very close, and it may have an importance which the old mysterious chasm between sensory and motor phenomena concealed. The theory does much to bridge this chasm. But, in order to render this service, I do not see that it was at all necessary to violate the unity of consciousness in the sensory sphere by a generic distinction between peripheral and central sensations, merely to satisfy a desire for analysing the conception of space into non-spatial data; or to strain the conception of 'innervation' so that upon occasion it might do the service of motor processes, and yet be as distinct from them as a possibility is from a reality.

III.—DEFINITION AND DEMARCATION OF THE SUBJECT-SCIENCES.

By Professor A. Bain.

The process of defining is here discussed, not in its fullest compass, but with the limited object of assisting in demarcation. Given the entire body of the Subject-sciences, it is desirable to ascertain the best mode of distributing the materials, so as to be able to say of any fact or doctrine that its suitable place is in one rather than in another.

It may be asked, at the outset, what is the criterion of a suitable place. The only answer is kindred or similarity, of which we must judge as we best can. A science is an aggregate of knowledge, whose particular items are more closely related to one another, in the way of kinship, than to any other collective mass of particulars. The propositions of Geometry have such preferential kindred among themselves; the facts of Chemistry have the same; so likewise the facts of Physiology, of Geology, of Politics. All men of science would rebel against a mixture of geometrical propositions, chemical laws, physiological particulars and political doctrines. To interpolate between the first and the second proposition of Euclid the properties of oxygen, and between the fifth and the sixth the three powers of the British Constitution, might not involve a single error of statement; but it would be an outrage on the decencies and conventions of science.

The reason is obvious enough, but yet is worthy of being explicitly rendered. We seldom encounter such gross misplacements as those mentioned, but we are liable to the practice in more insidious, and therefore more hurtful, ways. Now the chief benefit of the homogeneous grouping of our knowledge may be comprehensively described as intellectual ease, or, in other words, the economy of the powers of the understanding. Whether as simply an aid to memory, as a facility in comprehending proof, or for the higher end of invention, it is eminently profitable to view together related topics, and to exclude from the attention all that belongs to different regions of thought. This is one law of expository style. A good paragraph is said to possess unity; that is, it has a definite theme, and is restricted to the expansion and illustration of that theme. As already remarked, the

consequence of a breach of unity is not necessarily error; every affirmation may be perfectly correct in itself; yet the jumble of incongruous statements embarasses the intellectual workings, and does as much harm in its own way as positive misstatements. A resort to such confusion is one of the devices of sophistry.

That the ideally best distribution of the matters belonging to the Subject-sciences is not free from difficulty is admitted at the outset, and will be illustrated in the sequel. Nevertheless, any failures that can be alleged may not always be owing to intrinsic difficulty, but to a purely extraneous and accidental cause—namely, the excessive ambition of the cultivators of the individual branches, which is a motive to overstretch their several boundaries, by way of aggrandising their importance. For this weakness, however, it may be said there is no remedy but the moral regeneration of the scientists themselves. I answer there is a remedy, or rather there is a situation where the aggrandising tendency is neutralised. Among the distinctive merits of Aristotle, I would assign as one in particular, that he does not overstep the legitimate boundaries of the several branches of knowledge treated of by him; these branches representing nearly all the topics that concern the present theme. Of course, I make allowances for the imperfection of his grasp at that early stage. But take his *Organon*, and you will not find anything that a logician of the present day would consider as irrelevant, still less as belonging in strictness to a totally different department. My explanation does not rest either on his extraordinary power of discrimination, or on his self-restraint in not pushing a subject beyond its proper bounds. It is quite another consideration. His comprehensive intellect had sketched nearly the whole round of the sciences of mind—Psychology, Logic, Ethics, Metaphysics; not to mention Politics, Rhetoric and Poetics, which we may for our present purpose omit, although undoubtedly their foundations are in the subject sphere of thought. Now, if a writer has actually composed systematic and exhaustive treatises of Psychology, Logic, Ethics and Metaphysics, he is under no temptation to aggrandise one at the expense of the others. He is in a position of perfect impartiality. His judgment of the relationship and the proper localisation of any given proposition is unbiassed by preferences; for he need have no preferences. If he thinks a question more nearly allied to Psychology than to Logic, he assigns it to Psychology, he being master of that branch too. I doubt if

any philosopher whose one subject was Logic would have been equally pure in his handling. So, in formulating a department of Metaphysics, Aristotle was delivered from a still greater temptation to mix up heterogeneous topics in one treatise.

The position of Aristotle is not often reproduced in later times. The university teachers of Europe, during several centuries, reflected Aristotle's breadth, and would have the same absence of temptation to extend one branch at the expense of another. A few of our recent thinkers, as Kant and Hegel, have composed original works on most of his topics, but we cannot quote them as exact parallels on the point before us.

My plan of treatment is the following. Selecting the four leading departments of subjective knowledge—Psychology, Logic, Ethics, Philosophy (Ontology and Metaphysics being so far synonymous)—I will discuss their domains severally by dwelling on the points of contact between each one and every other. I may say in advance that the end I have in view is to isolate the questions most suitable to be included in the designation 'Philosophy,' by withholding from it every topic that can be claimed, with good reason, by any one of the three others. I therefore take them in couples thus : (1) Psychology—Logic ; (2) Psychology—Ethics ; (3) Psychology—Philosophy ; (4) Logic—Philosophy. There are still two other couplings, Logic—Ethics, Philosophy—Ethics ; but these we can dispense with. In fact, the gist of the inquiry is the best possible distribution of matter in the three fields—Psychology, Logic, Philosophy.

Couple first, then, is Psychology—Logic.

The province of Psychology is on the whole sufficiently well marked out, being the properties and laws of the human mind treated scientifically. In its lower region of Sense, it abuts on Physiology, and the line of demarcation of the two is an affair of some delicacy ; but that does not concern our present purpose, which has to do with the logical border. I propose, therefore, to inquire with some degree of minuteness into the province of Logic itself.

Now, whatever things may have been regarded, at one time or other, as coming within the scope of Logic, we cannot blink the fact that Logic had its apparent origin in the endeavour to rectify mistakes connected with the pursuit of truth. Aristotle, we may believe, would not have perfected the syllogistic machinery, with all its belongings, had he not designed to obviate the inadvertencies habitual to the

ordinary mind, especially in complicated reasonings. I may presume that the one thing agreed upon, as properly included in Logic, is the Aristotelian syllogism, or something equivalent to it. Whether a scheme of Inductive Logic should be appended is a matter of dispute in modern times, but could not have been so if the post-Aristotelian logicians had retained the entire *Topica*, as an integral part of Logic. Grote has conclusively pointed out that Aristotle fully conceived, although he very inadequately developed, the inclusion of Inductive Method in the logical scheme.

Assuming, then, that the primary motive of Logic was to correct human weakness in the matter of attaining truth, this must still be conceived as its central idea, unless, in the course of development, something has happened to alter men's views on the whole subject. It was, of course, possible that Aristotle may have been mistaken, either in regarding such a construction as wanted, or, supposing it wanted, as efficient for the end: on both suppositions the whole scheme was an abortion. Advocates of this extreme opinion have appeared from time to time. Another view consists in disregarding the practical applications made of the logical machinery by Aristotle himself, and in evolving from it aids to the higher speculation, as in the use made of the Categories by Kant and of the Syllogistic apparatus by Hegel. Truth and falsehood are, no doubt, still in view, but not the correction of the kind of mistakes indicated under the Aristotelian Fallacies.

Taking the practical-utility view of Logic, there is one thing worthy of being made prominent, namely, that the machinery is not imported from any other branch of knowledge: it is built up on the very ground where it is to operate. In the later developments, when Psychology on the one hand, and Philosophy on the other, assumed shape and obtained their present *locus standi* among the Subject-sciences, it may have become related to those two branches in the way of both giving and taking; but Aristotle's mode of going to work was to study actual examples of reasonings, good and bad, and to draw from these the formulæ of reasoning in general; in other words, the Syllogistic scheme and all that related thereto. It was in the same way that Grammar was formed by generalising the constructions in actual speech. Bacon's Induction was derived in a similar fashion. Newton's Rules of Philosophising grew out of his study of the theory of gravitation, the only extraneous help being Ockham's razor.

If anything more is needed on this point, I can cite as an

illustration the question—Does Logic include an Art of Discovery? Mill would seem to say it does not, if we look merely to his emphatic statement that Logic is the Science of Proof or Evidence. But he overshot the mark and contradicted his title-page, which includes an express reference to Methods of Scientific Investigation. The explanation of his position was, I believe, that the Inductive Logic of his predecessors—Bacon, Herschel and Whewell—pointed to invention almost exclusively, and took for granted that, when discoveries were made, the evidence would be forthcoming as a matter of course. What we should now say is, if there be an art of Discovery, it would seem to have a place in Logic, unless, indeed, its mode of operating were unique and entirely detachable from the processes involved in proof.

The use that I intend to make of the reference to a supposed art of Discovery is this. Such an art is not, any more than Proof, obtained from an extraneous source; it grows strictly out of attending to the actual instances of scientific investigation. This was the course followed by Bacon, Herschel and Whewell, for example. I can quote an anecdote in point. In my own *Inductive Logic*, I thought proper to compose a chapter on the Art of Discovery, embodying everything that I could seize hold of as in any way bearing on the art. Believing that the actual procedure of men that had made discoveries must be a principal source of the art, I had a conversation with Thomas Graham, the chemist, and asked him point-blank whether from his experience he could formulate any procedure that would be useful to others in the task of discovery. Graham was a cautious as well as a modest man. Instead of answering directly for himself, he quoted with approval a saying of Dumas—'Follow game'. Now, without attempting to appraise the worth of this advice, I give it as showing that it grew out of the actual work of research, and was not superinduced and derived from any other region of knowledge.

My drift is, I think, now apparent. Logic is avowedly, and by more or less cordial agreement, a body of formulæ for testing and for discovering truth. In this capacity, it would seem, judging from its origin and sources, to be independent and self-contained; neither borrowing nor lending out of its own domain. Keep it to this function, and you ought not to be troubled with either its invasion of other departments, or its absorption by other departments. There is not, in fact, any branch of knowledge that claims to be its parent;

and there ought not to be any branch that should arrogate its function.

Why, then, is Logic not satisfied with this grand *rôle?* It certainly has trenched upon matters that may be claimed for other departments: notoriously Psychology and Philosophy or Metaphysics. The fact is that its machinery, contrived in the view of attaining certainty in ordinary matters of truth and falsehood, has been found to possess an independent interest and charm. The formulæ of Concepts, Judgments, Reasonings, ending in the Syllogism, make up a work of intellectual symmetry agreeable to contemplate. Then, again, as we have seen, the searchers after truth have not been contented to dwell in the more familiar regions of the practical and the accessible: they have aspired, like the Titans of old, to take heaven by storm; to lay down theorems as to the origin, extent, duration and government of the entire universe. If there be such a thing as an artificial help to the intellect in arriving at truth, it is pre-eminently needed for the most arduous search of all. Hence, Logic can hardly avoid becoming involved in this transcendental pursuit; many, in all ages, would value it more for its assistance here than for its rectification of the doctrines of physical or political knowledge. Still, its great founder was sparing in his allusion to these high speculations within the *Organon* proper. He did enter upon them, but in a place apart, if we may interpret the etymology of *Metaphysica* as posterior to the *Physica*, and distinct from the *Organon*.

In the subsequent coupling, Logic—Philosophy, I shall return to this topic: here I am exhausting the couple, Psychology—Logic. I am now prepared for submitting to the reader's judgment the proper placing, as between these two, of certain matters that have fluctuated in their position. And, first, as to certain seeming encroachments of Logic on Psychology.

The grand principle of Resemblance, Identity, Consistency, is vital to Logic; it occurs everywhere. The ultimate test of truth involves a judgment of consistency or agreement. That a certain substance is arsenic is proved by the coincidence of its reactions with certain predefined reactions characteristic of arsenic; implying also its disagreements with all other substances. Now this same property of Agreement enters into Psychology, as a law of the human intelligence connected with the reproduction of thought—the recovery of something formerly experienced at the instance of something resembling what is now present.

As a psychological law, the mode of treatment consists in laying down the conditions that favour and those that thwart the resuscitation; likewise those that determine the direction that it may take among several possibilities. Such inquiries seem wholly unnecessary for any purpose in Logic, except, perhaps, when it overtakes the arduous problem of assisting discovery; while in Psychology they are in their own place, and in the position to enjoy all the advantages of collateral lights. It seems to me, therefore, that there can be little room for dispute as to the partition of this great topic. I cannot help thinking that a chapter on Association of Ideas is out of place and superfluous in a logical treatise; the incongruity being aggravated by considering how little the Law of Contiguity, the chief support of memory, can have to do with any of the departments of Logic. It was expressly adverted to by Locke as a source of bias, prejudice or fallacy; but this is merely an incidental application, sufficient to justify a brief psychological reference, but not a full exposition.

Next, as to Psychology encroaching on Logic. The chief examples of this are found in our older psychologists, who, under the Faculties of Abstraction and Reasoning, went into the nature of Concepts, Judgments and Syllogistic inference. The two-sided character of the law of Resemblance, just alluded to, would be one explanation of this encroachment; which, probably, would not occur in a writer that professed both Psychology and Logic. For example, Mr. Spencer never penned an avowed treatise on Logic. This may account for his including under Psychology several chapters on the theory of Reasoning, exactly as he would have given it in a logical treatise. He goes over the ground of the Syllogism, and sets up a rival to the old Aristotelian scheme. Now, while there is no apparent advantage in placing the topic in the line of a psychological exposition, the Psychology proper can hardly fail to suffer from the interruption.

If there be one point more than another that would seem exclusively logical, it is the enunciation of the Uniformity of Nature as the axiom at the foundation of all inductive proof. Some are of opinion that it should be referred to Psychology. For this I see only one pretext, namely, that we have an instinctive tendency to believe that what has been will be; which, however, does not make the doctrine either more or less certain, or in any way affect its exclusively logical bearing. If it is to be partitioned between Logic and any other department, that must be Philosophy, as will appear in the sequel.

So much for our first coupling. The chain of exposition would be apparently least unbroken if the next were Logic —Philosophy; but as this brings up the final question of all, everything that can prepare the way should first be adduced.

The couple Psychology—Ethics would open the very wide door of the ethical province. The designation 'Ethics' is notoriously elastic. The initial difficulty is peculiar to Ethics itself—namely, the wide difference between the ostensible object of the science and its ordinary treatment.

If, as is commonly said, the science of Ethics teaches the moral and social duties of men, an effective refutation was given by Plato in the *Protagoras*. Men's duties have been all along taught, not through formal enunciation and methodical arrangement, but by discipline for neglect and approbation for compliance. Such is the education of the family and the community, to which a science of Ethics adds but little. If, with Paley, we add the 'reasons,' we must put a peculiar construction upon that term. It is not 'reason' as meaning the ground or justification of moral precepts; the implication being that these have to stand or fall according as the reasons are adjudged to be satisfactory. Society does not allow the reasonableness of its dictates to be opened up in this way. The only reasoning that is tolerated is the reasoning that assists in overcoming men's reluctance and repugnance to do their duty; in short, it is received as an aid to moral suasion, which has always been very much in want of support. Nor can it even be said with much truth that Ethics abbreviates the education in duty by a summary and methodical arrangement of our several duties. Our experience in society hardly leaves us ignorant of any important requirements; and, as to the difficulties of conflicting obligations that made the Casuistry of the former ages, a scientific discussion is of very little use, and modern writers seldom waste their strength on such difficulties. They can be settled in the same courts that settle the rest—the courts of social opinion—adjudicating on actual cases as they arise.

The first great work on Ethics, the work of Aristotle, sufficiently proves the difficulty of limiting the field. I have already put stress upon Aristotle's vantage-ground in deciding what should fall under each of the several sciences of the subject-sphere. He had Psychology (although the least matured of the group), Politics, Logic, Metaphysics, Rhetoric to relieve the plethora of his Ethics; yet he still retains there a quantity of psychological matter—desires of the Soul, the nature of the Voluntary and Involuntary, the

theory of Pleasure—his only tenable excuse being that all these points were incidentally raised in connexion with Ethics as viewed by him.

If we refer to the questions most usually associated with Ethics in modern times—the Standard and the Faculty—we can discover very little connexion between them and the moral rules that society has established and takes pains to enforce. A law is a law when once it is adopted and promulgated, and its origin does not make it more or less obligatory. Whether the standard be social utility, an instinct implanted in us, or a revelation of the Deity, the regulation of conduct is the same. Even the divine origin makes no essential difference; the enforcing body, being the existing community, may be just as strict in one case as in another.

We can see from Aristotle that, in order to make a systematic and scientific Ethics, he took an entirely new and independent start, namely, the consideration of human excellence, according to an ideal standard, under which the individual is a law to himself, and aims at something higher than conformity to the rules of the general community—rules that needed no scientific investigation, or even express embodiment in verbal formulas. It was thus that he was led to define man's chief Good, or Highest End, and under it the several virtues, according to their consummate type of a golden mean. So also his definition of Friendship, as the highest source of Social satisfaction, and the perfect union and adjustment of the Egoistic and the Altruistic regards.

Now the remark on all this is that the Aristotelian treatment, as well as the continuing form of scientific Ethics, consisted not in deriving maxims from other departments of the subject-region, but in working directly and inductively upon the field of human conduct, just as Logic was derived from a study of actual reasonings, good and bad. Ethics is thus, to say the least, a department by itself, not capable of being merged in any other, and not justified in absorbing any other, although liable (like all the sciences we are now considering) to vacillation of boundary, and the consequent need of a rectifying operation. It is not difficult to see where the rectification, as regards Psychology, should take place. Without stopping to argue the conclusions, I assume without hesitation that Psychology should claim absolutely the handling of the Will, the nature of Conscience, whether it be viewed as simple or as complex, and the reality and sources of Disinterested Action. With equal confidence, and with a still greater concurrence of opinion, I affirm that the

inquiry into the Standard is a unique research, and should have the field to itself; it is not psychological, not logical, not philosophical or metaphysical. How far it may touch upon Sociology, still more upon Theology, is a distinct matter, and will be referred to presently.

I must now be allowed an observation upon the standing anomaly of Ethics—the composition of large treatises without any direct bearing upon the moral conduct of mankind, supplying no new instruction as to what society expects of us and only a very slight aid to our motive power in doing right. If Logic were to be as barren for its avowed object as the corrector of inadvertence in matters of true and false, it would, in our utilitarian age, lose its place and prestige for good. I take it, then, that the topic of the Standard, so incessantly rediscussed, owes its importance to its bearing on the supernatural or divine. At all events, there have always been theorists who could see theistic consequences, not only in the doctrine of Revelation as the standard of morals, but in the theory of Intuitive or Instinctive morality. Now, any matter of speculation that touched these vast issues would acquire a transcendent importance, in comparison with which the regulation of social duty, even if that were really accomplished by ethical inquiries, would dwindle into insignificance. Hence it is that the ethical writer is not likely to remand to Psychology proper the analysis of Conscience. For the same reason, Free-will, which has also been credited with high theistic bearings, may, in spite of any remonstrance of mine, continue to be regarded as an indispensable portion of the science of Ethics.

It is with the next coupling that our difficulties begin, although they do not end there: I mean Psychology—Philosophy. As with the foregoing couples, the plan to be pursued is still the same. We assume, provisionally, a field for Psychology and Philosophy respectively, and, by concentrating our gaze on the conterminous portions, endeavour to rectify the boundary in cases where we find overlapping or encroachment. I will begin with one vast question, which seems undoubtedly to have a foot in both regions: I mean External Perception. Can this be made out wholly and purely psychological, to the riddance of Philosophy from one of its chief embroilments? Can it be retained bodily in Philosophy, to the lightening of the burden of Psychology? Can it, with advantage to itself, be distributed between both, and, if so, upon what terms, and in what divisions?

If we answer the first question we answer all the three. I repeat, then, can everything that fairly appertains to this problem be exhausted under a purely psychological treatment? I think not. What seems to me truly psychological, and in its proper place in Psychology, is the analysis of Object and Subject considered as compounds. If, indeed, their composite character is denied, as, for example, by Ferrier and Samuel Bailey, there is nothing psychological in the matter. But I do not understand this to be the position of the most extreme Realists, as Reid or Hamilton. Even Spencer, who is a decided Realist after a fashion of his own, makes a very elaborate analysis of the objective and the subjective sides of our knowledge, resolving them into psychological elements of sense and intelligence. If, then, this is allowed, the place for it must be Psychology, where the components are described with all the advantages of collateral exposition. Theorists of every school have put stress upon the feeling of Resistance as the groundwork of what we call the Object-world. And it is no less apparent that to the Object attaches the peculiarity of being the same to all minds—an admission that leaves open the matter at issue between the Realist and the Idealist. The psychologist is thus free to give his view of the mental components of the Object-consciousness and the Subject-consciousness respectively, and to maintain that view against rival thinkers, simply on the ground of sufficiency or insufficiency as an analysis, there being no properly metaphysical consideration admissible in the decision; just as the nature of Conscience is the purely psychological part of Ethics.

Supposing this point allowed, there awaits us the controversy between Realism and Idealism. Now, although Mr. Spencer includes this, too, in his *Psychology*, as he does the logic of the Syllogism, he separates it entirely from the psychological analysis, and conducts the inquiry in a totally different manner, not in any way invoking Psychology into the discussion. In nine successive chapters, extending over seventy-five pages, he reviews the whole question in dispute, endeavouring to refute the averments and reasonings of Berkeley and Hume, and to establish, by a variety of considerations, the Realistic position, after purifying and reforming its language, under the designation of Transfigured Realism. Now, my contention is that this is not a properly psychological exposition like the analysis of Object and Subject. True, there are assumptions respecting the mind drawn into the handling; but that is not enough. We may make applications of

psychological doctrine in a thesis that would not be properly placed in a system of Psychology, there being perhaps concurring applications of other sciences, as Logic, Physics or Physiology. What is the real brunt of the Perception-difficulty? Plainly the demonstration by Berkeley (to his own satisfaction at least) that an independent external world involves a contradiction in terms, and that *esse* means no more than *percipi*. Well, how have the combatants on both sides gone to work over the question? In various ways, no doubt; but, as an example, we need only refer to the favourite contention of the Realists, that consciousness testifies to an External World independent of our minds and consciousness cannot lie. The Idealist must deny this testimony, or he must interpret it differently. Now such matters as the authority of consciousness and the import of the term 'External' may be said to run close upon both Psychology and Logic, and may derive elucidation from both, but yet may be properly withheld from the regular exposition of either, and be assigned a place apart. This place would be, as I conceive, in the department named by the several designations, Metaphysics, Ontology, Philosophy. While I am satisfied that an advanced Psychology and an advanced Logic are alike serviceable to the determination of the controversy, I do not consider that either can dispose of it finally. This, then, is one topic that would come under the head of Philosophy.

The next example is the Kantian position in the *Pure Reason*. Kant himself maintained that his theory of Knowledge, being concerned with validity and not with fact, was outside of Psychology; and he was right. Supposing anyone were to attack him on his great thesis—the possibility of synthetic judgments *a priori*—and were to join issue upon the geometrical proposition, 'Two straight lines cannot enclose a space'—the controversy would certainly not be psychological; it would be by a combination of Geometry and Logic that the allegation could be either confuted or maintained. The answer of most thinkers at present would be that this proposition, whether *a priori* or otherwise, is not a synthetic but an analytic judgment; yet, for my own part, if I were to be very rigid, I would no more raise the discussion under either Geometry or Logic than I would under Psychology. I would invoke both these sciences as adjuncts to the settlement; but that is quite different from introducing it into either in the regular march of the exposition.

The allied Kantian position—that regards Space and Time as pure subjective 'forms' imposed by the mind on a

'matter' of experience—would seem to be an item of pure Psychology, inasmuch as an adequate psychological resolution of the notions into primitive elements of sense and intelligence would be the appropriate alternative. It is not, however, in this way that Kant is usually met: the disadvantages of such a polemic are too serious. While the analyst has all the difficulties of an arduous problem to encounter, the Kantist has only to criticise the weak points. What is usually attempted is to confute Kant on his own ground, on the score of inconsistency with himself, or with the admitted conditions and facts of knowledge, just as with the synthetic judgments *a priori*. Hence the discussion is properly extra-psychological, in the sense already given; that is to say, it may apply psychological as well as logical knowledge, but would not form a chapter in a continuous scientific or methodical treatment of either department.

A third boundary-question, under the present couple, is the crux of Epistemology, or Theory of Knowledge; that is to say, the impossibility of knowing a sense-particular without a pre-existing generality that sense cannot give. This is merely another way of putting the Kantian position, but it is not confined to Kant; it reappears in all the anti-empiric or *a priori* schools. It is the deadlock of the knowledge-question, and its chief analogue is the celebrated puzzle of Zeno, on motion. Of it I will merely say that it has an apparent connexion with Psychology, seeing that the psychological analysis of knowledge should dispose of it. Nevertheless, a wary psychologist will not venture to establish the empiric, as opposed to the intuitive, solution by means of his analysis; just as Newton would have declined resolving the paradox of Zeno, as not in his parish. It is a question of how we made our first start in knowledge; and that question we have no means of solving except by the analogy of our present progress, in which general and particular are inextricably commingled. On the whole, therefore, in the partitioning of Psychology and Philosophy, this also would pass to the latter of the two, with the same permission to make occasional drafts upon the established psychological conclusions; yet not more so than upon Logic, which ought to intervene in all propositions that are accused of self-contradiction.

Fourthly, the ultimate grounds of the validity of knowledge, or the legitimate sources of belief in the last resort, are least of all included in Psychology. For although belief, as a state of the subject, ought to be resolved in a psychological system, the groundwork of belief in any given propo-

sition must be something outside; just as the account of conscience as a faculty does not carry with it the grounds of our several duties or of obligation in general. I have already adverted to the most fundamental of all assumptions—the Uniformity of Nature, the validity of which, as I conceive, is not established either by Psychology or by Logic.

Enough for the present upon the couple, Psychology—Philosophy. We may recur to it in the handling of our final couple, Logic—Philosophy, which ought to cover nearly all the remaining ambiguities that beset the province of Philosophy.

The first point of contact of these two branches lies in the special definition of Philosophy as the unity of all knowledge, the common groundwork of the sciences. Every separate science has its narrow sphere; Philosophy in some manner deals with the whole.

Now, there is an aspect of this unity that might very well come under Logic, as being one of the auxiliaries to its principal aim; I mean the Classification of the Sciences, and of all knowledge, upon some definite principle that would set forth their mutual bearings—their points of agreement and difference, their order of dependence and succession. Various attempts have been made to construct such a classification; the most ambitious being, perhaps, those of Auguste Comte and Mr. Spencer. So enamoured was Comte of this aspect of his *Philosophie Positive* that he made it, in part, his justification for attaching the venerable term 'Philosophy' to his work, after repudiating Metaphysics, on the ground that he had clenched the unity of human knowledge by his arrangement of the sciences according to their natural sequence, and had assigned to each its characteristic method or logical peculiarities.[1]

This meaning of Philosophy may be looked at as we have been looking at all the rest. Has it a suitable place and a

[1] Comte had another reason for assuming the title '*Philosophie Positive*,' namely, his three 'stages,' or modes of viewing the whole Universe of things—theological, metaphysical and positive. There is much to be said in favour of applying the word to this great transformation of human thought. It is a process not properly included in any of the sciences, physical or mental, and is not out of kin with the usual topics of philosophy. As a Method, or point of view for regarding the world, we might enrol it among the reserved topics given at the close of the paper as making up the philosophical field. I think, however, that the discussion raised by it falls better under Theism than under Philosophy. It is usually in the interest of Theism that Comte's stages are counter-argued. His 'metaphysical' stage by itself does no harm to anyone, and would scarcely provoke a serious criticism. His illustrations would find a place among Logical Fallacies.

proper kindred with any other recognised branch of the Subject-sciences? In point of fact, it has actually been disposed of in three ways. First, it is treated quite apart by Mr. Spencer, whose *Classification of the Sciences* is a work by itself; it is outside even his very comprehensive expository scheme. Secondly, it may be an introduction, or prolegomena, to a scientific series which aims at representing all our knowledge that has taken scientific form. Comte himself is an example of this. Thirdly, it may be included in Logic proper, as I myself have dealt with it. If any one of these is a legitimate placing, the effect would be to keep it distinct from Philosophy.

As, however, the supposed unifying scope of Philosophy is not fully made out by mere classification, we need to find what is left over. Now, while each science has its fundamental notions—Physiology, life; Chemistry, atomic combination; and so on—there are certain other notions still more fundamental and pervasive, as Space, Time, Cause. These are assumed in all the sciences, upon the basis of a certain number of concrete examples, by which they are so far fixed as to be used consistently and intelligibly for scientific purposes. Nevertheless, there has been suspended on all of them a kind of discussion very different from what is usual in science, namely, their origin as between the subject-mind and the object-world. Space and Time we have had occasion to notice already. Cause, in like manner, has its transcendental puzzles, which the mere man of science refuses to deal with. General as the notion is, he still includes it in the ordinary scientific treatment; it recurs in all the sciences after Mathematics, and has a different embodiment for each—Gravity, Heat, and so forth. But although it runs through several sciences, and is thus a common or unifying principle, it is not, therefore, on that account outside science altogether, and in want of the retreat that Philosophy provides. Only when Hume reduced Causation to a pure empiricism, and provoked a counter-demonstration from metaphysicians at large, did the notion assume an aspect out of relation to science, and in keeping with Philosophy. So long as the point raised by him continues matter of controversy, there is at least one topic that will seemingly give Philosophy a *locus standi* in contrast to Physical Science. Not conclusively, however, until it be seen whether Hume's difficulty may not be overtaken in Psychology or in Logic, one or other, or in both? Undoubtedly, there is a psychological inquiry as to our idea of Cause, whether it is an intuition or

a product of experience and association; there is also a logical inquiry as to the certainty or validity of the belief in causation. But, if we have already concluded as regards Psychology that Space and Time have a controversial phase appropriate to Philosophy, and also that the validity of Nature's Uniformity is assumed by the logician without debate, then, to be consistent, we must reserve the treatment of Cause in its final analysis to the philosophical region. What makes a Cause causal? asks the metaphysician, and this he does with a view to withdraw the question from Psychology and Logic alike, and to retain it in his own special province.

One more plunge into the depths of Metaphysics brings up the formidable contrasts of Knowing and Being, Thought and Reality, Appearance and Reality, Phenomenon and Noümenon, Relative and Absolute. The word Ontology is applied to this class of inquiries, so is Metaphysic, so also is Philosophy. Our present plan is to regard the whole compass of these three designations as making up but one department, for which Philosophy is a title justified by a certain amount of respectable modern usage. Therefore the point at present is, how much of the discussion that the several antithetic couples give birth to can be disposed of under Psychology or Logic, so as to leave a minimum to Philosophy proper. The preliminary question, however, what do they severally mean—are they, or are they not, different names for one problem—would have to be disposed of, even before asking how much of their contents would go to Psychology or to Logic. A science that is aware of its own province would decline to consider whether an ambiguous notion or proposition fell within that province. First tell us clearly what you mean, express yourself in language that is devoid of equivocation, and then we can say whether the matter pertains to our branch of inquiry — such is the psychologist's and the logician's reply to the request for admission into their respective domains. Now, nobody can have surveyed the problems of so-called Metaphysics or Philosophy in the most superficial manner, without seeing that the definition of vague terms was an indispensable preliminary to most of the inquiries. To which it may be replied—That would bring it within the logician's province: a very plausible, but not a conclusive remark. There is this much in it, that Logic may give some artificial aid in defining general terms, as when it suggests and explains the importance of taking a notion on its two sides, positive and negative—superadding the statement of what the notion is not to what it is. But then, supposing Logic to originate

this prescription and to give it form and illustration, it is not bound to go out and enforce it everywhere, or in the difficult problems of human knowledge in general: all that is properly obligatory on the logician is to give sufficient examples to make the process intelligible and applicable; each learner then carries it into operation in his own particular walk, the metaphysician and philosopher among the rest.

If Knowing, as opposed to Being, Existence, Reality, is but one problem, the preparatory inquiry would be to give some explanation of the meaning of the great abstraction thus variously named; which would at once open the controversy with those that regard 'Existence' as a factitious and incompetent term, as, in fact, having no meaning, inasmuch as it outstrips the relativity of our notions, which makes the final end of generalisation a couple, and not a unity. Seeing that I do not here pretend to arbitrate or take a side on this matter, but only to determine in what compartment or division of the Subject-sciences it should be fought out, all I have to decide is, that neither Psychology nor Logic is the place, and thus, by a process of exhaustion, it must be received into Philosophy. The great Perception-question is in close alliance with the question of Knowing and Being; and many thinkers include the two under one treatment. Still, it is possible to distinguish the two, or to regard the first as more limited than the second. Our mode of dealing with a world that is open to our perception, although difficult to express otherwise than as perceived, is not the same as the handling of a world out of all relation to perception. The difference mainly resolves itself into our stretch of assumption of what is beyond. The solution of the Perception-difficulty will not carry with it the conclusions that we expect to draw from Philosophy, as, for example, Theism. To the wider region of Thought and Being would fall the Unknowable, as raising the same debate on the nature of Relativity,—whether Relation can be extended beyond co-related couples, in the ordinary acceptation, to a couple 'Relative—Absolute,' and so, by implication, establish an Absolute and Unknowable. At all events, these are clearly matters not for Logic, any more than for Psychology, and therefore stand forward as candidates for admission into Philosophy.

Although the modes of expressing these great final issues are numerous, the problems underlying are not so. I have already enumerated nearly everything that is debated within the transcendental region. I would omit the 'nearly' but for one supremely important issue—namely, Theism, or

God and Immortality, for which Philosophy is regarded as an essential preparation. Now, what concerns the present discussion is, whether or not Philosophy should absorb Theism, or Theology, on account of this close relationship. The considerations that seem to me to negative this absorption are these. The sources of the theistic argument are usually referred to several departments of knowledge, physical as well as mental. Biology contributes the argument from design. Psychology is appealed to on intuitive first truths, free-will and a moral sense. Philosophy reserves such questions as we have been disentangling from the other branches of the Subject-department. Now, we may fairly reason that Theism should no more be absorbed into Philosophy than into Biology, Psychology or Logic. Because Biology provides the argument from design, it does not, in its own expository course, pursue that argument to its theological applications. So with Philosophy. The theologian or anti-theologian may there find weapons for his special purpose, but the expounder of Philosophy, in supplying those weapons, does not make himself either an advocate or an opponent of Theology. The very limited Theism of Aristotle might very well have been accommodated in his treatment of such topics as we now call Philosophy. But modern Theology has assumed dimensions incompatible with such treatment; and it is a much nearer approach to the fitness of things for Theology to swallow up Philosophy, as in Dr. Martineau's recent work. No doubt we are accustomed to the claim on behalf of Philosophy, that it is, by pre-eminence, the foundation of the theistic structure. That this claim will ever be generally acknowledged is more than doubtful. We cannot well suppose that a branch of knowledge that is with difficulty freed from the suspicion of word-juggling, can be the main support of the two most tremendous issues ever submitted to the judgment of mankind.

Reviewing now the array of topics obtained by the method of comparing the several Subject-couples, at their points of contact, we have to examine the result from another side. The criterion of the philosophical residuum hitherto has been want of sufficient kindred with Psychology, Logic or Ethics; more particularly the two first. We must add the further criterion—kinship in the topics themselves. Let us ascertain whether there is a sufficient community, in the matter and the method, to make it profitable to include all these topics in one field of investigation.

The following is a summary list of the residual or reserved questions, as they have come up in the course of the survey :

1. Uniformity of Nature—its grounds and validity.
2. The Synthetic Judgments *a priori* of Kant.
3. Space and Time as forms antecedent to experience.
4. Knowledge generally, as respects its origin in the Universal or the Particular.
5. The problem of External Perception, as between the Realist and the Idealist.
6. The wider question variously expressed as Knowing and Being, Thought and Reality, Relative and Absolute, Knowable and Unknowable, Unity in Duality.
7. The nature of Cause in the respective spheres of Matter and Mind.
8. Validity at large; the place of the Feelings in Belief.

I do not pretend to have given the best arrangement of these topics; nor do I insist upon any particular order in their handling. To fix an order is to take a side, and to incur the crushing rejoinder of Demosthenes to Æschines, at the opening of the *Crown Oration*, that it is the inherent privilege of a litigant to choose his own order, instead of being dictated to by the opposite party.

I might appeal to the unreasoning intuition of those that are familiar with Subject-studies, whether these questions have not a common ring. I might farther refer to professed synopses of the department, applying, where necessary, the excision demanded by the foregoing survey.

More convincing than either of these arguments, because closer to the point in hand, is the specific comparison of the several themes, which shows intimacy of relationship in various ways, and more particularly in these two. In the first place, certain of the questions so nearly resemble as to be accounted identical by some reasoners, though not by others. This applies to the very commanding pair (5, 6) of External Perception and Knowing *versus* Being. Next as to 2, 3, 4—the origin of Knowledge, what solves one will probably solve the rest. This group of problems cannot be positively identified with the other, but would commonly be deemed a suitable preparation or collateral support. The relationship between 1, 8 (Validity) and the rest is not similarity but dovetailing; they present the questions in their vital aspect, the certainty or reliableness of the conclusions reached. The discussion of Cause (7) chimes in with (1) Uniformity of Nature, and has certain points of contact with (3) Space and Time, while containing an element peculiar to itself in the forecast of the Theistic argument.

As involving the method of procedure and the difficulties

to be overcome, there is one pervading feature in the whole class, namely, the stretching of abstractive generalisation to its utmost bounds, and far beyond what is deemed necessary for scientific specialists in their several departments. This operation puts a severe strain upon the capacities of language, and demands extraordinary precautions against deception and bamboozlement. The faculty and the training for such a work may be regarded as identical for the whole class.

In conclusion, I believe I am correct in saying that the best authorities on the philosophical province would admit all the points I have enumerated, and would quarrel mainly with my proposed omissions.

Note on the meanings of 'Philosophy'. This word deserves a history to itself. Its fluctuations and fortunes need to be reviewed in order to pronounce on its ultimate destination. The conclusion arrived at in the foregoing article—that the name is now to be regarded as the principal term for the transcendental branch of the Subject-sciences, taking the place of Ontology and Metaphysics, or using these as mere stepping-stones to its own predominance—is still open to challenge in this country, seeing that here, at least, the wider meanings have not yet been abandoned.

To refer to the origin and employment of the word in the schools of Greece would only be a preface to its spread in modern Europe, at the time when the Aristotelian curriculum was adopted in all our Universities. The breadth of the original term, as implying the higher form of knowledge attained by careful examination of facts, and speculative boldness in the search for causes, survives to recent times; and a conflict of usage is still traceable between the wider and the narrower acceptations of the term.

Hamilton (*Lect. Met.*, i. 63) contends that the limitation of the term to the Sciences of Mind has been always the usage. As to the prevalence of the wider meaning in this country, he declares that we thereby "expose ourselves to the ridicule of other nations". This may be so, but we are not yet in the way of finally succumbing even to that potent influence, nor disposed to surrender the term to the mental domain exclusively.

A very little research into scientific history shows the wide prevalence of the designation 'Natural Philosophy,' while its equivalent 'Physics,' or 'Physical Science,' at this moment only halves the territory with the older name. The proof is easy: it is a matter of statistics from patent facts.

Thomas Young's Catalogue of works on Mathematics and Physics, which comes down to the beginning of this century, is very convenient for historical reference. It shows exactly the comparative prevalence of the two designations 'Natural Philosophy' and 'Physics'. We are sufficiently correct in saying that, up to Young's date, the first is universal with English authors, and the second not less so with foreigners. Newton's illustrious example in the *Principia* would carry his countrymen with him, even if he and they had not yielded to a common impulse. The French are unanimous in adopting the term 'Physique'. The Latin treatises on the Continent are usually entitled 'Physica'. The English translators from French or Latin nearly always give the home-designation, 'Natural Philosophy'. Young himself may be taken as introducing the present century, and he adheres to the same title. I

believe a catalogue following his up on the same scale would show the continuance of the title for a good many years longer. Perhaps the first popular work that broke with English usage was Dr. Neil Arnott's well-known treatise; and the great circulation of that work must have told in favour of the title. Arnott's motives, however, as I learnt from himself, were somewhat mixed. He had, he said, to contend with a common prejudice against any medical man that took up his mind with things outside the profession, such as Natural Philosophy might be supposed to be. In the French word he found a convenient equivocation, which would serve as a blind to the ignorant. 'Physics' would be interpreted by a large class as 'Physic,' and would be thought strictly professional.

As we come later down, we find 'Physics' creeping into use, but many authors of the highest repute, as Sir John Herschel, clung to the old term. The great work of Professors Thomson and Tait is styled 'Natural Philosophy,' the title of their chairs. Probably their strongly-avowed deference to the very letter of Newton would be a motive for copying the title of the *Principia*.

In applying the statistical method to strictly contemporary usage it must be premised that all our public foundations for teaching the science make use of the old term. The Universities, English, Scotch and Irish, employ it for all chairs of any standing; hence professors and lecturers are reluctant to depart from it in their published works. In fact, the shortest method of getting at the facts is to look out for exceptions.

In Cambridge, the new chair of research in the Devonshire Laboratory is styled 'Experimental Physics'. 'Experimental Philosophy' was a very common term in former days, and is the name for a chair in Oxford, also in the new Durham College of Science at Newcastle. King's College, London, retains 'Natural Philosophy'; but in the earlier foundation, University College, this name (which had 'Philosophy of Mind' as its parallel for another chair) has given place to 'Physics,' employed also in Owens College and generally in the newer institutions. The prevailing language of published works in the sciences at large is manifestly in favour of preferring 'science' to 'philosophy' throughout.

A few words next on *Moral* Philosophy. This is also a title adopted and kept up in the older University foundations. It has been notoriously stretched beyond its original signification, and made to embrace a full course of Psychology, with Ethics superadded. The interesting point is to observe a tendency to disuse the word in favour of other designations —Psychology, Mental Science, Science of Mind, Intellectual Powers, Active Powers. Stewart and Brown give as titles 'Philosophy of the Human Mind'. Beattie, for a wonder, uses the phrase 'Mental Science'.

Hamilton's position is somewhat singular, and offers a puzzle to foreigners. He claims for the whole sphere of mind, or the Subject-sciences at large, the exclusive right to the word Philosophy. At the same time, he is very decided in regarding Psychology as the correct title for the science of mind; in short, for his course of Lectures embracing that science. Why, then, does he not use it? Why does he not even use 'Philosophy of Mind,' like so many others? Why does he prefer 'Metaphysics' as the title of the course? The explanation is easy, but not much more relevant than Arnott's choice of the word Physics. It was simply to suit the designation of his chair—'Logic and Metaphysics'. This compelled him, as it has done others who wished to treat the powers of the mind in a Logic chair, to regard Psychology and Metaphysics as synonymous. He could not have used 'Philosophy' without invading another man's chair: Reid, Stewart and Brown were professors of *Moral Philosophy*, under which title they too gave a psy-

chological course. As the professors of the Logic and Moral Philosophy chairs in the Scottish Universities seldom act in concert, so as to partition the psychological department between them, each one gives as much or as little Psychology as suits his individual liking; but they are alike precluded from using the name as the formal designation of their courses.

In spite of the influence of the old University-nomenclature, the tendency to extrude 'Philosophy' from the exposition of the mental powers is apparent even among ourselves; and we are gradually educating ourselves to the inevitable restriction of the domain as above expounded.

In Germany, the narrowing process is complete; and German influence is hastening it here. If this note were not already too long, I should like to quote a very striking passage from Lotze in illustration. The following are the introductory sentences:—"Philosophy is a mother wounded by the ingratitude of her children. Once she was all in all; Mathematics and Astronomy, Physics and Physiology, not less than Ethics and Politics, received their existence from her. But soon the daughters set up fine establishments of their own, each doing this earlier in proportion as it had made swifter progress under the maternal influence; conscious of what they had now accomplished by their own labour, they withdrew from the supervision of Philosophy, which was not able to go into the minutiæ of their new life, and became wearisome by the monotonous repetition of insufficient counsels."

This is Lotze's statement of the residual ground:—"This condition of things contained incentives to a constant repetition of two questions—first the question as to the intrinsic nature of existing things whose manifestations to us are the subject of our observation, and secondly the question as to the connexion in which this world of existing reality stands to the world of worth, of what ought to be. And all attempts to answer these two questions always stirred up forthwith a third question, that as to our capacity of knowing truth, and the connexion of this capacity partly with existing reality and partly with that which reality ought to be and produce."

The closing remark on the whole survey is to ask—What is the future destiny of the terms Ontology, Metaphysics, Epistemology, which, either separately or in combination, would have sufficed to cover all the ground that we have been considering? I can give no authoritative answer to the question, however relevant or reasonable it may be considered to be. I only know that these terms must give way to Philosophy as the comprehensive designation of the field. Their position as subordinate titles is not so easy to assign. For one thing, it would be confusing and impracticable to divide the ground amongst them, and give each a portion under the larger title; consequently, they must be dropped as names of departments, and cease to appear in our Encyclopædias as such. They could still remain in the Philosophical Vocabulary as words that have had a historical standing, which they no longer preserve. But farther, it is often remarked that though our language contains numerous groups of synonyms, yet we find on examination that almost every member of such groups has a slight shade or peculiarity that no other possesses; so that occasions arise when one is more suitable than the others. Now, it may be said of these three terms that their history has given to each a fitness for certain applications, as descriptive terminology, in characterising the special questions included under the name Philosophy. I do not need to protract this note by special illustrations; they will readily occur to my readers.

IV.—A BASIS FOR ETHICS.

By Professor S. W. Dyde.

The object of this article is to present a metaphysical principle which will serve as a basis for Ethics, and to apply that principle to one or two of the test-questions of moral science, with the view of pointing the way towards a possible reconciliation on the one hand of Intuitionism and Utilitarianism, and on the other hand of Egoistic and Universalistic Hedonism.

First, then, I assert the principle not simply that the self, from whatever point of view it may be considered, is opposed to the other-than-self, but that the opposition of the self to the other-than-self, or the antagonism between man and nature or God, is transcended through a union which is the fulfilment of each of the hostile members. From this it would result that man before any conflict with the world must be counted as a mere potentiality, and that only through such conflict can he realise his capacities. In other words, it is only when he identifies himself with that which at first appears foreign and opposed to him that he comprehends his own nature. As an illustration of this principle, man may be considered as a unit in space, as body, as composed of different substances, as possessed of life, and as a member of society. The knowledge of myself as a unit would seem to be the knowledge of myself as absolutely distinct from any and every other unit; but I as a mere unit am at once absolutely distinct from and absolutely identical with every other unit. If I were merely an individual object, I might be any one of an indefinite number of objects. The nearer is the approach to absolute difference, the nearer the approach to absolute identity. Again, man as a body of a peculiar shape is clearly separate from all other bodies, but, inasmuch as all bodies are extended, man as extended is not different from but the same with other bodies. However much bodies may differ in shape from one another, they are alike in that they all occupy space. A knowledge of myself as occupying space implies a knowledge of space which is the infinite possibility of particular shapes or figures. The opposition, then, between myself and the world from the point of view of the extension of matter is removed by reference to spatial relations. In the physical sciences and

chemistry, it is almost self-evident that the laws of gravitation and chemical affinity, for example, though formulating essential properties of objects, yet make emphatic the dependence of every object upon every other object. When the object is an organism the dependence of it upon that which is other than itself assumes a more prominent aspect. Absolutely to separate a living being from every other thing would be to destroy its life; so that life implies on its very surface the dependence of the living object on other objects. But if life be considered from the point of view of reproduction, there may be observed two special facts—namely, that the individual in isolation is unable to perpetuate its kind, and that, at least amongst the higher animals, the young can not for some time provide for themselves. The first of these facts reveals the truth that the vital unit is not one particular organism, but the union of it with a complementary organism. The second fact reveals the truth that the vital unit is actualised only in the family. The idea underlying these two relations peculiar to the province of life finds its perfect expression only when we examine the nature of society. Society has been called an organism; and such a definition is valuable inasmuch as it emphasises the dependence of the members of society upon society and of society upon its members, just as the organs of a living being are dependent on the organism and the organism on its members. This view also serves to expose the fallacy of the theory that society is a fortuitous collection of separate persons, but it is not itself an adequate view of the nature of the state. The assertion that the state is an organism whose members in turn are organisms would be nearer the truth, and would indicate that the individual did not cease to be an individual in being a citizen. At the same time it may fairly be thought impossible to conceive of an organism whose parts were organisms, the difficulty lying in the fact that terms capable of expressing the phenomena of life are not adequate to express the phenomena of consciousness. But that which remains an insoluble problem from the point of view of life is proved by the fact of society, whose members are separate and yet exist only in relation to their fellow-citizens. If a man could be conceived of as completely severing himself from every possible social interest, he would cease to be a reasonable being. Robinson Crusoe is not an example of such a man, for he took with him to his desert island capacities which had been actualised through society. Nor is it possible to cite or even fancy an example; for, so soon as you imagine a man, you must of necessity imagine him as pos-

sessed of powers which could never have been his except through connexion with others like himself. The only true solitary is always a potential society, and every act of such a man is the perpetuation of some kind of society. Aristotle said that the solitary was either a god or a beast, by which saying he meant that man as man must be indissolubly connected with his fellows. But this saying of Aristotle's is not perfectly accurate, for a beast is the possibility, if not of society, at least of a herd or a colony, by whatever name it be known, while a god who did not manifest himself in any way is an impossibility.

But, again, just as from the point of view of life the existence of the individual implies the previous existence of individuals, so from the point of view of society the existence of a citizen implies the previous existence of a state. As, too, in the case of life, so also from the point of view of consciousness, man is at first unable to care for himself. From his earliest consciousness he has been becoming acquainted with the institutions and customs which surround him. The citizen is not, Minerva-like, launched full-formed into the midst of his fellow-men, but comes to them fashioned by much the same mould as were they. The Greeks considered the state to be a parent who could control the actions of his children, the citizens. While this view overlooks the fact that a man is a separate existence although a member of the state, it yet points to the truth that every man was in the nursery of the state, and that the majority of men never leave that nursery. It is true that from the point of view of self-consciousness some do rid themselves of the state's swaddling-clothes, some do reach a manhood which is not measured by their years; but these are they who, having fully comprehended the nature of the society in which they find themselves, at once proceed to create, from the materials before them, a society better able to comprehend them. Every man is consequently, in a very important sense, the offspring of his age. Even if he rises above the existing society and is able to notice defects in it, yet that society none the less formed and made him, and so contained within itself the possibility of its own advance. It is plain, therefore, that, if I know myself as a self-conscious agent, or simply if I know my highest self, I know myself not only as distinct from others, but likewise as the crystallisation of the elements which are in solution in society; in other words, the individual can not be merely an individual, but is in a sense society. From this it becomes manifest that a lonely man, if by a man is

meant a self-conscious agent, is an inconceivable abstraction. Further, it is plain that, as each individual is the realisation of a previous society, society as capable of comprehending an indefinite number of individuals is greater than any one of them. While society is the individual it is more than the individual, for it is the infinite possibility of individuals. Without doubt the individual is not simply society, but more than society, inasmuch as he is capable of possessing an ideal of a community not seen as yet; but it still remains true that that community must be realised through the development of the society as it is now constituted.

As a conception gains in clearness by being viewed from various points of vantage, the relation of man to the world may be looked at briefly thus. Poets are fond of telling us that man is what he beholds and touches. It is true that man is a material object in the sense that both he and it are subject to the laws that govern inanimate nature. But it is equally true that man would look in vain in the inanimate world for a complete and adequate reflexion of himself. The ordinary opinion that man is utterly different from blocks and stones and such senseless things has this foundation in truth, that these things are incapable of embodying his higher potentialities. In one sense, therefore, man is not at home in the outer world. But as that outer world is seen to comprehend more and more lofty categories of existence, it answers more and more perfectly the questions which man continues to ask. It is only when the world is viewed from the standpoint of man as rational that the yearnings of the individual become articulate, and that he can begin to comprehend his own nobler destiny. In other words, the process of self-comprehension is the process of the comprehension of the universe. When the correlation of man to the world is fully seen, and the antagonism between them is found to disappear before the unfolding of that self-consciousness of which each is a mere element, it becomes manifest that the supposition of the final dualism between the self and the other-than-self is an assumption which renders impossible the complete understanding of either term. Walt Whitman, in a poem called "Assimilations," says:—

> "There was a child went forth every day
> And the first object he looked upon, that object he became;
> . . . . . .
> The early lilacs became part of this child,
> . . . . . .
> And all the changes of city and country, wherever he went".

It may not be the most profitable task to turn poetry into philosophy, but such language as the foregoing is the poetic way of stating that, if man seeks to realise himself in isolation, he is attempting to clothe a mere shadow or trying to grasp an air-drawn dagger. Further, he realises himself not simply when he finds that intelligence can lasso the stars, not simply when he feels points of contact between himself and the fulness of the life of nature, not simply when he spends himself in promoting the well-being of mankind, but when he comprehends that nature is a unit or an intelligible system, and that he is one with nature in its whole depth and height. It must be added that man as rational does not find himself completely actualised, and so become absorbed or lose his identity in the progress of the world. He returns into himself after the actualisation of himself in nature, and the more comprehensive estimate of himself, which is a result of this self-measurement, is the condition without which progress would be impossible.

The relation between the divine and the human may be considered from two different points of view, from the standpoint of their differences or from the standpoint of their agreements. But the standpoint of the difference between the divine and the human is itself viewed in two ways: the divine is esteemed sometimes as the mere negation of the human, or again as a negation which yet contains the human within itself. When an individual exclaims against the narrow boundaries of this work-a-day world, his exclamation may announce that he has completely understood the world in which he lives, or that he has not as yet begun to understand it. The young dreamer tickles his æsthetic palate with fancies about the moon and clouds before he has begun to realise the nature of a home. He gambols playfully before he settles down to the eating of grass. So, too, it frequently is with the ardent religious reformer. Often his enthusiasm consists in a diatribe against the world, which he couples with the flesh and the devil as the triumvirate of evil. His society is an ideal which could be defined only as not anything distinctively human. It may in time dawn upon him that his conception of the divine is an empty negation, and that the life, which he had been accustomed to consider as a narrow prison, is an abode all of whose chambers he will never be able to explore. The point of view of mere negation may be found in whole bodies and societies. It lay at the roots of the belief that the early Christians were atheists, and it is largely that which actuates the Salvation Army in its crusade against existing society.

While such a view of the divine is totally inadequate and leads logically to physical and spiritual annihilation, it is yet the first step towards a just estimate, according to the principle that a thorough-going antagonism is the only true basis for a vital union. Consequently, taking this principle as a point of departure, the second view of the relation of God to man includes within the conception of the divine all that is human; at the same time the full significance of the human is not by this view thought to exhaust the meaning of the divine. If it be granted, then, that the divine is the human and more than the human, it may yet be asked—What is the nature of this something more which at any rate seems to distinguish God from man? If we are in any sense foreigners to the intellectual life and moral rule of the Supreme Being, this something more which separates man from God not only is not human but can never be human. If, now, it were said that this celestial element must be, because opposed to the human, both irrational and immoral, it might be replied that, while it was for the present beyond the guess of our reason, future generations might come to comprehend it. But such a reply is not of any avail, inasmuch as, if future generations or we at any future time comprehend that of which we now know nothing, it is manifestly not beyond the reach of comprehension. Nevertheless, underlying the notion of the divine residuum is the truth which is found in the conception of progress. Only by continually showing the inadequacy of the present attainments of intelligence can we advance to other and higher things. It is this truth that has caused those who have been pre-eminently the world's seers to look beyond the narrow limits of the passing hour, and proclaim to ordinary men that new things were approaching and that a cloud, at first perhaps no bigger than a man's hand, was rising above the horizon of their little life. It is, therefore, legitimate to consider the divine as the subject of poetry and faith, if it be understood that the poetic or divine light is simply reason prophesying that it is about to grapple with a new problem. Faith might thus in a figure be called the forerunner of reason.

As a brief sketch of the relation of the individual to society and of man to God has now been given, it must be asked —How has this principle, that man as a mere individual equally with man as a mere citizen is an abstraction, whereas the true individual is he who, though a separate person, is in irrefragable union with the society in which he lives—how has this principle to do with the significance of motives or the question of man's freedom? In order to pursue this

inquiry intelligently, there may be given two theories as to the nature of conduct—the view of Mr. Herbert Spencer and the view of Dr. Martineau. Mr. Spencer considers conduct to be exhibited by all living creatures, and defines it as acts adjusted to ends or the adjustment of acts to ends. This twofold definition permits him, when noticing that the rotifer by its whirling cilia sucks in food, to count such an act as a portion of conduct, and as the same in essence with the conduct of an agent who acts so as to secure an end. If volition is essential to the action to which can be applied terms of approval or disapproval, then, in order to make an ethical subject out of the rotifer, it must be taken to whirl its cilia with a conscious purpose. If, on the other hand, the supposed internal changes of the rotifer are of themselves enough to characterise the essence of conduct, then the free purposes of man form but a more or less momentous incident in the field of ethics. It is by making much of the observed adjustment, and little of the fact that for man such adjustment is a purposed act, that Mr. Spencer is able to connect so closely his theory of evolution with his theory of ethics. It is in this way, too, that he bridges over the chasm between instinct and motive. For Dr. Martineau, on the other hand, a motive or 'spring of action' is, first, a phenomenon of a person or free agent. But as, according to his view, we might be aware of a spring of action without being able to assign to it any moral value, such a spring would be, in the second place, simply a spontaneity or an inner propulsion urging the living being along an unknown track. As an animal or a lunatic may be actuated by a mere spontaneity, a spring of action plainly need not be a phenomenon of a free agent.

It is manifest that each of these theories contains two very different accounts of a motive or spring of action: firstly, that, being a personal phenomenon, it is the expression of a free agent; and secondly, that as it is a mere spontaneity common to man with animals, it is not the expression of a free agent. While these accounts appear to be flatly contradictory of each other, there is a sense in which each is true. It may be true that an animal is urged by a mere spontaneity in a direction unknown to itself; that is, an animal does not act in the same way in which a free agent acts. It may be true, further, that man, perhaps even the mature man, is actuated at times by such a spontaneity. At the same time, not until we have an act, in the full meaning of the word as the product of a free agent, do we enter the field of ethical discussion. Consequently, to obliterate

the distinction between a spring of action from the standpoint of a free agent, and a spring of action from the standpoint of a mere animal, is to make ethics a branch of physiology. On the other hand, while these seemingly contradictory estimates of a spring of action may both be true from the point of view of the history of the individual or the race, both cannot be correct descriptions of a spring of action for a self-conscious agent; for the spring of action for a self-conscious agent has its dynamic source in the agent's mind or will, and is therefore the free identification of himself with any possibility of an act.

The radical distinction between an impulse as a mere instinct and an impulse as the outcome of free-will is disguised under the popular language which attributes to tendencies strife or conflict and speaks of an agent as tempted by his own desires. If moral action is and must be purposive, in the sense that a particular act must be the self-determination of the individual towards a certain end, then, while it may be true that mere tendencies clamour for recognition, it is plain that such tendencies, however clamorous, are quite incapable of initiating a moral act. The only possible initiative is the self-identification of the individual with a certain end, and this self-identification may or may not hush the clamour of a particular tendency. The phrase, 'strength of an impulse,' is capable of receiving two different meanings according to the signification given to the word 'impulse'. If an impulse be regarded as an instinct which propels the individual blindly forward, and as virtually the same, therefore, whether found in man or animal, then the strength or intensity of such an impulse could not, it is evident, depend upon the nature of volition. Such impulses or instincts may be modified in an individual animal or in a species, and an inquiry into the cause of modification would be a task distinctly biological. When the nature of the instincts of a human being came under discussion, it would be necessary to note that in this case impulses were capable of modification through voluntary action. Yet the examination of the extent to which voluntary action alters the character of impulses would be simply one item in the undertaking. But when the subject of ethics is dealt with as distinct from the subject of biology, then the fundamental fact is not that man is a creature of instinct but that he is a free agent. An act is not now the simple uninterrupted career of an instinct but the free adoption by the agent of a certain course of conduct. Owing to the great change in the importance of the fact of will or free union of the individual with a certain possibility

of action, there is a radical alteration in the way of conceiving of an instinct or incentive. The strength of an impulse now means the clearness or vividness with which the agent imagines or conceives of the results of a supposed act. It is not meant that the impulse as a mere instinct, and therefore as stronger or weaker according to the environment, has disappeared on the introduction of self-consciousness. It is meant simply that, though such impulses may and do still find a place in the individual, they do not constitute or help to constitute a motive. If, therefore, mere instincts or spontaneities be under argument, their strength would be ascertained by an estimate of their physiological antecedents. But if the spring of action be viewed as a motive, then the intensity of such a spring depends on the distinctness with which the agent conceives of the supposed consequences of his act. The degree of distinctness with which he conceives of results will be due to the extent to which he has previously made these results his own, and the thorough identification with results is often, though not necessarily, connected with habitual action.

But common sense is on the side of the objection that a man's nature has such an influence upon his conduct, that he is drawn sometimes against his will to commit what he knows to be a misdeed. It would seem to be a general opinion, also, though not proclaimed so confidently as the preceding, that some people are led by their very natures, perhaps not involuntarily, but certainly with little resistance, to do what is right. Further, science would appear to sustain common sense, in that now we have been made familiar with the conception of inherited tendencies either towards goodness, as when a person is said to have a disposition naturally gentle, or towards evil, as when a man is afflicted with a hereditary passion for strong drink. And it might fairly be asked if these things do not affect the question of good and bad conduct. It might be replied that no philosophy, though it might take exception to this language of common sense, could afford to deny the virtual truth of its contention. Men, though they have as human beings a large number of tendencies in common, are of diverse dispositions owing to differences in their surroundings and in the surroundings of their progenitors. But if, to take an illustration, a man is born with what is called a craving for alcoholic liquors, this means, in the first place, that he in deciding whether he shall or shall not drink has to reckon with an unusual physical unrest, and, secondly, that he more keenly estimates the pleasures or dangers of indulgence. Ethics does not deny

the physical tendency or, in popular language, craving, but it asserts that the things of consequence in moral science are, on the one hand, that the results of drinking are not the same for the man whose nature craves stimulants as for those whose natures have no such craving, and, on the other hand, that he and they do not stand in the same attitude towards the possible results. It must further be noticed that one man may give as his reason or excuse for drinking that he has inherited a strong physical inclination for liquor, while this may be the very excuse or reason why another man persists in a regime of total abstinence. Thus there are in men differences in their physical natures and in their attitudes of will towards these natural differences. As the basal fact of moral science is the approval or disapproval of free action, ethics must confine itself to differences in motive or the attitude of will. But it may be asked—If a man with an inherited longing for strong drink is overcome by his passion, would not the sentence of disapproval be lighter in his case than in the case of a man who acted in the same way although not subject to the inordinate temptation? It may be the sentence should be heavier rather than lighter, in that the curse-laden victim should have realised the ruinous results of indulgence. But whether the judgment be heavy or light, the fact remains that the individual in question is not responsible for his having a hereditary craving for liquor, any more than he is responsible for having a hereditary need of food or fresh air. Responsibility begins when he voluntarily undertakes to gratify a tendency; and the insistence upon various degrees of guilt is aside from the mark and only obscures the real issue. Accordingly the current notion, that a free being can be tempted by his own desires, means that certain results of an act are thought of by him as in some way or other pleasant; the fulness of his idea depending, it may be, upon satisfaction, or, it may be, upon dissatisfaction, with his ordinary life.

There is thus a good reason why Mr. Spencer and Dr. Martineau vacillated between two different conceptions of motive. That which requires to be explained is the act of a free being; and while it is, on the one hand, manifestly more than the operation of any mere instinct, it plainly cannot, on the other hand, be extracted out of a mere capacity for voluntary action. How are these seemingly opposed statements to be harmonised? Evidently the mental antecedent of an act is the self-appropriation by the agent of a certain tendency of his nature, and it is rightly insisted that such mental antecedent, and not its external manifestation, forms

the very heart and core of an act. Yet both aspects of that antecedent should be made prominent. No meaning can be attached to appropriation, unless there is something to appropriate; while, again, unless there is that appropriation, there is no genuine act. Pure will, or will without any object to be willed, is pure lawlessness; pure instinct is complete bondage to law, and therefore the negation of freedom.

A motive may consequently be said to have a subjective and an objective aspect. The objective aspect brings to the front the particular tendency of his nature with which the individual has identified himself; the subjective aspect brings to the front his identification of himself with the tendency. To substitute a mere aspect of an act for the act's complete significance is to build an ethical theory upon the sand. A few words may be said about each of these elements of free action. First, what is meant by a tendency of a man's nature or the objective element of an act? Already it has been argued at length that the individual was in one sense separate from, and in another sense identical with, others. Each man is born into a society which has been for many years in the process of formation. In this process, which is never completed, things are brought to light which are both new and old: new because they take on the shape of a new civilisation; old because this new shape is only a modification of one that had previously existed. There is therefore, as time goes on, a wider foundation on which to build. This foundation at any given epoch is the commonly understood ideal of the community, or the recognised laws, institutions and customs of the particular commonwealth. While this ideal changes with the changes in the people, it can at any special period be characterised with a fair degree of accuracy. The growing man thus gradually becomes acquainted with the current understanding. It is sufficient here to note that he is taught by experience the social judgment on many moral questions. As, too, he is the offspring of the state, he is potentially what the state is actually, and the moral judgments with which he becomes familiar are in a sense the actualisation of his own moral capacities. These judgments, which are of course capable of modification and enlargement, form the individual's stock-in-trade. He is not very old, for example, before he experiences hunger and thirst, and, without understanding the significance of the lesson, is taught, by his almost always being supplied with the necessary food and drink, that society has no trouble in recognising the general rule that the hungry man should eat and the thirsty drink. The word 'society' is here used in

an extremely general sense; for plainly, in order that a being should be endowed with the appetites of thirst and hunger, the only society requisite is the union of those who have given him life. These tendencies are therefore due to such society, and are based upon the physical nature common to human beings and many animals.

Careful examination will disclose the wide difference between the change which takes place as an organism gradually exhausts its vital force, and the desire for food which is usually under such circumstances the outcome of free agency. All animal organisms need to be regularly stocked with fuel to replace that which is consumed, and animals generally, no doubt, feel the pain or sentient uneasiness that results from any deficiency in its supply. A man perhaps cannot remember a time when he did not recognise what was meant by this feeling of pain, and did not know how such uneasiness could be removed; but it is probable that many of the motions of infants are but feeble and random efforts to remove that pain of whose nature they are not yet aware. We can fancy the mental state of the child to be a vague sense of uneasiness, coupled with a vague desire for the removal of the uneasiness. But this vague sense and vague desire are very different from, though fundamentally the same with, the man's clear consciousness that his body requires nourishment, and consequent desire for food as the means to satisfy his hunger. So long has a man been aware of the character of his need of food, and accustomed to eat when the need arises, that he finds it necessary to make some slight effort of analysis to distinguish between the physical state or tendency and the volitional state or desire for food. It may further be observed that in the tendency pure and simple is not implied any knowledge of its nature, and so not any knowledge of the objects the appropriation of which would for a time remove the cause of the tendency's pressure. Eating is so common an act that ordinary language has inaccurately designated the bodily tendency as the desire for food; but the bodily tendency, the knowledge of its nature, the knowledge of the nature of food, the desire to remove the cause of the physical commotion, and finally the desire to satisfy one's hunger through the eating of food, are all quite different, though all are found in the act of will of the free agent. Man is cared for so long before he can provide for himself—before he is able even to feed himself—that he is thoroughly familiar with the nature of hunger and the means to appease it before he is called upon to act at all. It is mainly for that reason that he associates a

complete knowledge of the tendency with its occurrence. In other words, the knowledge of the tendency as sentient uneasiness, and the knowledge of that which is capable of removing the uneasiness, are not bound up in the mere tendency, but are habitually associated by the agent with that tendency because of a long experience. Nevertheless, even for the most inexperienced agent the tendency does not initiate any course of action, or urge the being forward on an unknown path; else the being cannot be called an agent. Even for the most inexperienced agent the mental antecedent or true act consists in a desire to rid himself of an uneasiness, and so a more or less definite determination to search for that which will effect its removal. While it is not necessary here to enumerate the possible tendencies of human nature, it is necessary to bear in mind that, though a tendency may exist alone even in man, no free act can be characterised as the self-propulsion of such tendency, and that, inasmuch as such tendency may exist alone, the knowledge of its nature and of the end necessary to be obtained to remove its pressure are not inseparably connected with it but are the product of experience. Or, to put this truth into the language which has already been several times adopted, both man's tendencies and his knowledge of their nature are due to society.

But, in the second place, while the individual is possessed of tendencies which are the actualisation in him of the possibilities of society, yet he, because he is an individual, is likewise the potentiality of their actualisation. From the standpoint of ethics the individual, as the possibility of motive or identification of himself with a certain end, has to wait only till the tendency presents itself in him, or, more simply and universally, till a suitable opportunity occurs. Then he asserts his individuality and appropriates the tendency, or, in other words, wills to act. So we have the second or subjective aspect of a spring of action, namely, the adoption by the individual of any tendency. Accordingly the act, which is the realisation of the powers inherent in society, is none the less the realisation of the individual's own capacity. That which is on one side a revelation of the other-than-self is on the other side a self-revelation also.

Before proceeding to consider the effect of this discussion upon volition and the relation of Intuitionism to Utilitarianism, we may gather up the results thus far obtained. It is admitted on all sides that there are tendencies, called indifferently instincts or spontaneities, which inevitably arise in all living, or at least sentient, beings. Further, inas-

much as these tendencies avowedly do not in the world of mere animals imply consciousness, it is no very rash assumption that they do not in man of necessity carry with them a knowledge of their presence. Thus there are two distinguishable elements—namely, an instinct and a knowledge of the presence of the instinct. Further, if the tendency be a sentient uneasiness, a knowledge of its presence may be followed by, or perhaps in some way involve, a wandering desire for the removal of the uneasiness; but, since there may be no knowledge of the nature of the uneasiness, there may be no effort of will to actualise the means necessary for the removal of the bodily disturbance. Thus we have a certain instinct, a knowledge of its existence, and an ineffectual desire. Thus there may be in an individual a tendency, a consciousness of its presence, and an unformed desire, without there being also any clear conception of the character of the tendency. So soon, however, as the individual becomes aware of the nature of the tendency, he is necessarily aware of the results of its actualisation. If he knows the sentient unrest to be the need of food, he cannot but know that the eating of food will remove the unrest. He is now able to identify himself with a certain end or course of conduct, and with the means also in so far as he knows them and in so far as their adoption is within his power. It is only now that there is obtained the full-grown motive, which implies on the one hand a tendency, which is the outcome of an organism common to all animals or of a mental, moral and æsthetic nature common in some measure to all rational beings, and on the other hand the identification of the individual with the tendency; and this act is the individual's declaration at once that he is himself and not another, and also that he is in essence one with, it may be, the whole race of mankind.

Thus it is evident that volition is very far from being the activity of an instinct. It is quite as evident surely that volition cannot be any spark struck out by a conflict or collision of instincts. As a single impulse may carry a person along an unforeseen track, two would be no doubt inclined to carry him along two unforeseen tracks. But, as it is not possible that the individual should go in two ways at once, it must be supposed that the impulses decide to fight it out. The contest may result in a victory for one or the other, or else in a drawn match. If either wins a victory, it carries the individual, who has been a passive spectator of the struggle, along its unforeseen track. If they are even gamesters, nothing can be done until the arrival of reinforce-

ments. Even if the individual were aware of the moral value of the incentives, there would not necessarily be volition. The record of his observation would in that case be not simply that this or that spring prevailed, but that the more or the less worthy prevailed, or, as before, that they were equally powerful. Consequently volition must be taken to involve a purpose or the conception of some end.

But Intuitionists and Utilitarians, while agreeing that volition includes the knowledge of some end, would differ as to the character of the end, the Intuitionist declaring that everyone must actualise some kind of impulse or affection, the Utilitarian declaring that everyone acts according to certain conceived results. If our foregoing conclusions with regard to the nature of motives are correct, then the knowledge or belief that a certain incentive should be carried into act is in every way equivalent to the knowledge or belief that to make this incentive one's own will accomplish the best results. If the knowledge of a tendency be vague and general, then also the knowledge of the results of its realisation will be vague and general. Such a rule as 'Be benevolent' means both 'Give expression to a noble aspect or tendency of your nature' and 'Do that which will promote the general happiness'. It does not mean that in any particular case you must act from benevolence, for so to do might be to deprive your family or yourself of some necessity. Before it can be decided that in any given case it is right to act benevolently, account must be taken of the consequences of the act. The point of importance, however, is that the rule, no matter how general, implies a reference to general results, and that it is not possible to know an incentive or tendency of our nature without knowing as well the results of its issuing in an overt act. But some Intuitionists, of whom is Dr. Martineau, hold that it is possible to know the nature of incentives and to arrange them in a graduated scale of excellence, without taking into account the consequences of acts. Dr. Martineau further states that it is only when two incentives conflict that one is recognised as higher than the other. It is plain that the maxim 'Be benevolent' cannot conflict with the maxim 'Be prudent,' nor can 'Be compassionate' conflict with 'Be just'. It is only when a man must act in a specific way that there takes place any encounter between two general principles. Thus the introduction of strife between incentives, as the test by which to decide their relative moral worth, is simply a subtle way of introducing the knowledge of all the essential results of each of two definite acts. Since Dr. Martineau's *Types of Ethical*

Theory is in some quarters taken as an authority on the ethics of Intuition, I may be pardoned for noticing that he himself in the following cases virtually admits that a conflict of tendencies is not capable of disclosing their moral value. (*a*) Dr. Martineau admits that perhaps no part of his task is more difficult than to determine the controversy of the claims of the love of gain and the passions of antipathy, fear and resentment.[1] With regard to fear he further remarks: "Nor can we perhaps assign to fear, simply as such, a uniform value relatively to other springs of action. Fears cannot be appraised without reference to the worth of the objects feared."[2] (*b*) It is averred that the affection of sentimentality is "often saved from the taint of selfish indulgence of feeling by considerable remaining vestiges" of parental love and compassion. "When a hurt is received which springs from no malignity that calls for protest, an amiable temper may easily rise above the moral level of natural resentment. But when the evil inflicted is a wrong, no preference for peace can be accepted as an adequate ground for quietude."[3] This signifies that sometimes sentimentality must be considered as higher than resentment, and sometimes resentment as higher than sentimentality. (*c*) The love of power is awarded a high position by Dr. Martineau; but he says: There "are, however, abuses (and, in comparison with its whole range, very rare ones, I believe) of a motive which, duly subordinated, has a legitimate sphere, neither narrow nor ignoble".[4] Clearly, when examination is made of the impulse as such, no notice can be taken of the legitimate use or the abuse of it. To recognise a due subordination, or an abuse of the love of power, is to consider the objects upon which it is directed, and so to pass from mere incentives to definite acts. If another definition of the love of power be taken, namely, that it is "an undistinguishing intensity of the whole nature,"[5] it is at once evident, that little, if anything, can be said of its moral value. (*d*) When the incentives of wonder and admiration are co-present in the individual, "there seems no reason for assigning to either impulse an authority superior to the other".[6] Thus the question whether an individual should pursue the subject of art or science receives no answer from Idiopsychological Ethics, though it holds that the value of art to mankind may be very different from the value of science. (*e*) "With the *keenness* of compassion take into account the *universal scope* of

[1] *Types of Ethical Theory*, vol. ii., p. 181. [2] P. 184. [3] P. 188.
[4] P. 194. [5] P. 199. [6] P. 203.

the affection, knowing no bounds but those of suffering, and its *duration* through the whole of our life, and these three features sufficiently pronounce its superior authority to the *provisional instinct* of parental love, though the latter, *during its season*, must sometimes be the more imperative."[1] It is here admitted that two springs of action change places according to their relative intensity, whereas Dr. Martineau had previously maintained that "from the pure psychological comparison of quality, the accessories of special intensity and external relations must be struck out".[2] (*f*) Here are three remarks upon what Dr. Martineau calls compound incentives: "Love of praise has a great latitude according as it is more or less qualified by social affection, and more or less select in regard to the spectators whose praise is coveted";[3] "We cannot insert generosity at an invariable place in our list";[4] and "The permissible cases of resort to falsehood cannot be determined without careful attention to the canon of consequences".[5] Any one of these admissions is sufficient to raise doubts as to the value of a theory which is confessedly a failure just when it should prove its power to succeed. The enemies of Intuition need fire no guns when there are traitors in its own camp.

By observing the whole import of a motive we have found good reasons for concluding that Utilitarianism and Intuitionism are not two antagonistic positions, but merely two aspects of a full-orbed and completed theory. In a similar way it may be possible to reconcile the opposing claims of Egoistic and Universalistic Hedonism. It is doubtless true that any theory which affirms that a man necessarily seeks his own pleasure cannot furnish a substantial basis for a rule which bids him seek the good of others equally with his own. In other words, no theory which builds upon the notion that the individual is in essence a mere unit can logically enunciate the maxim that he ought to consider the well-being of society. On the other hand, it is equally true that no theory which declares that a man must seek another's good can in strictness deduce any rule whereby he may rightly provide even for his own bodily needs. Any theory which begins by counting man as a mere citizen and ignoring the potent fact of his individuality reduces each person to the level of an automaton. In either case, as the foundation is laid on a recognition of only half the truth, the superstructure must be partial and inadequate. But the opposition between Egoism and Universalism may be

[1] P. 206. [2] P. 182. [3] P. 222. [4] P. 226. [5] P. 244.

removed by a more comprehensive estimate of what is implied in a motive. If our estimate of the origin and nature of the tendencies of man be taken as correct, then a tendency is both the result of the individual's way of life and a fulfilment of the promise of society. Strange, therefore, as it may sound, a person cannot be purely egoistic or purely universalistic, for in considering himself he must consider others, and also in considering others he must consider himself. This truth, which has the air of a paradox, may be given a more cordial reception if the discussion be freed of some technicalities of expression.

It seems clear that every man seeks some form of self-satisfaction. He who does his duty in any emergency thinks that by so doing he best realises his higher self. Some moralists prefer to say that he who does his duty through love of it conforms to the will of God. But the will of God is not something external to the agent; it is rather found in the superior authority of the higher course of conduct. Man in actualising the loftier tendency of his nature obeys the will of God. Evidently, then, he seeks in each act a particular form of self-satisfaction. None the less does the individual who follows the lower impulse seek to satisfy himself in some specific way. He who finds his pleasure in delicate tastes and odours, to the exclusion of higher interests, attempts to obtain some definite form of self-satisfaction. Again, the hermit who shuts himself away from what he esteems worldly occupations and enjoyments is not thereby living a life of mere negation, but is striving to actualise what he believes to be his true self. Even the one who mortifies his members, not because he thinks such mortification in itself desirable but because he imagines that by it he will secure greater pleasure in this world or another, evidently negates present satisfaction only that he may obtain self-satisfaction in the future. Manifestly, in strict accuracy, the forms of self-satisfaction sought must be as numerous as the individuals seeking. At the same time, for practical purposes, the number of these forms could be reduced to the number of types of individuals, on the supposition that, though individuals of the same type differ one from another, they yet present sufficient points of agreement to warrant their being classified under a common designation. It may be said, for example, that certain men find their highest enjoyment in the exhilaration and excitement of some athletic pursuit, others in the inspiring intricacies of business-life, others in the joys of social gatherings; others, again, devote themselves to art or literature; still

others find their highest satisfaction in the relief of the distressed. But some may be equally eager in several directions, while many have no strongly marked desire except that of providing for the welfare of themselves and family. Even those who occupy the higher seats of life are generally apportioned their share of cumbrous flesh, and are, in Plato's way of speaking, domineered over by the tyrant, to this extent at least that they must eat and drink. Remembering, then, that any division of men into classes or types is merely an approximation, we might roughly represent these types as coincident with the possible tendencies of human nature. But these bloodless types are not to be mistaken for living men and women, since a human being has the capacity to realise himself in many ways and cannot exhaust this capacity by any number of acts. Bearing this in mind, we may recur to the question—Is self-satisfaction the end of action? Different answers must be given according to the different constructions put upon the question. If self-satisfaction be the residuum obtained by abstraction from all particular forms of self-satisfaction, then it is never sought, because it is not, in any intelligible sense, the satisfaction of any possible person. In every act the agent seeks to realise that which satisfies him; and in this way the gratification sought is as precise as is the distinct motive of the particular agent. The satisfaction which is the product of abstraction, exactly because it is a mere generalisation, cannot be the end desired by any person. On the other hand, it might with equal truth be answered that an agent must seek self-satisfaction, if by it is meant the appropriation of a certain tendency of his nature. But, further, self-satisfaction may be apprehended not as an abstraction from particulars, but as that universal self-satisfaction which comprehends these particulars within itself. This self-satisfaction would lose its grasp of no aspect of man's nature, but would prescribe to each aspect its proper sphere, and might be construed as a complete life. Such satisfaction might be made an end of action. Leaving the further discussion of this point till we reach the question of right and wrong in conduct, we may turn our attention to some side-issues in connexion with any effort to reach satisfaction, and try to unfold some of the less prominent elements implied in a free act.

Every voluntary act implies in strictness a comparison of alternatives and a verdict; it implies, in short, a prior decision to act. It is true that in ordinary action the individual puts forth no very preceptible mental effort in reaching a conclusion, for the palpable reason that in every-day

life certain definite states of mind have been formed with reference to nearly all possible contingencies. It is implied in habit that the character of an act frequently done does not require the same minute inspection as that of an act never formerly done or done but rarely. But decision, though inconspicuous, is none the less present, and no decision is reached entirely without effort. No one accustomed to observe his own habits of reflection can be ignorant of the fact that the struggle to decide has two very different phases. It indicates an unrest which may be viewed as indissolubly linked on the one hand with the pain and on the other hand with the pleasure of self-assertion. In some natures the state of suspense seems to approach more closely to a pleasure, in others to a positive uneasiness; but both must be found in every nature capable of grappling with a mental difficulty. Secondly, when the decision is reached, two seemingly opposite results may again be observed. Conspicuous is the fact of pleasurable repose or the feeling of satisfaction at having reached a conclusion; yet there is also, more prominently in some cases but never utterly absent in any, the sense that the mind's genuine occupation is gone and that the weak piping-time of peace is made for intellectual sloths and peacocks. The feeling of dislike of inactivity is implicit in the feeling of satisfaction. This twofold character of a decision is perhaps illustrated practically by the current conviction that the best mental rest is a change of exercise, and may be one of the meanings of the following lines of Goethe:—

> "Men are by much too fond of easy-going rest,
> And very prone their muscles to relax;
> So have I sent the devil, who with zest
> Will stir the drones and follow in their tracks".[1]

But we are still in the dominion of pure thought as distinct from what is generally known as the dominion of volition. All that has yet been described might occur in a successful attempt to solve a geometrical problem. Whether or not there is latent in such an attempt an inner mandate the same in kind with that which requires for its fulfilment a change in the external world, it is plain that the solution of a problem does not seem to be shorn of its proportions without such external change.

[1] "Des Menschen Thätigkeit kann allzu leicht erschlaffen,
Er liebt sich bald die unbedingte Ruh;
Drum geb' ich gern ihm den Gesellen zu,
Der reizt und wirkt und muss als Teufel schaffen."
—*Faust*, Prol., 97.

But when there is issued the inner mandate, which is not fully made up unless some bodily act takes place, then is entered the realm which is popularly considered to embrace the whole question of volition. To my mind too wide a breach has been made between thought and volition. What are in essence only two aspects of the same process have been viewed as two completely distinct functions. If the vital element of volition be self-determination, then volition must be present in the endeavour to solve a question in mathematics, or in any intellectual effort of any kind. But if we limit ourselves to inquiries that are admittedly ethical, solid ground is under foot when it is affirmed that, when an individual decides to act, his character is by his resolution at once "touched by a clearer purity or a fresh stain". Rage and lust are none the less rage and lust because they are impotent. Compassion for the poor is none the less compassion though it has no goods to bestow upon them. But another and a new problem arises when the agent seeks to actualise his desire. He wills the means in willing the end, but the means may be only in part under his control. The body may be more or less incapable of carrying into effect the intended act, and, even if the body be fully capable, the laws of nature, including the regulations of society, may intervene to prevent the act's fulfilment. The marksman desires to hit the centre of the target, but his eye may be untrue or his hand unsteady, and so the bullet may fly wide of the mark. Even though his hand be firm and sight keen, imperfections in the rifle, or a cross-current of air, or shifting light may spoil the shot. Murder may be in the heart of a man, but society may imprison him, and he can do no murder on stone walls or the unfeeling ground. Accordingly he who wishes to accomplish his act has often by patient practice and well-timed effort to reduce the chances of failure to a minimum. Every act of a man is the impress of his will on the outer world, or the rendering of the body and the inanimate world more obedient to his hest. A beginning is made with the random activity of the infant, which has to learn even the way to its own mouth, and there may finally be reached the rhythmical movements of the well-trained athlete or the almost unerring action of the skilled mechanic. In willing the means, the individual must come to a decision which, so far as it is a mere act of thought, is substantially the same with the decision to actualise a certain end. In the case of habitual action, deciding upon the means is not explicitly distinguished from deciding upon the end; but in the case of an unusual act the individual, while aware of the

end desired, may be in doubt as to the means for its attainment. Nevertheless, as the acts of decision are in the two cases formally identical, the decision to adopt certain means does not require separate treatment. But further, just as the mental effort was associated with elements of pleasure and pain, these elements are found associated with the bodily act also. Through mere motion of the limbs there arise pleasant sensations, the desire for which is one of the reasons for engaging in the measures of the dance; but connected with mere motion is found also the sense of irksomeness to bodily effort. Likewise, when the means are realised, there is the satisfaction at having won a victory, which is yet tinged with the boding that the satisfaction cannot last, and the latent desire to escape from the rust of idleness. What is involved in the attainment of the end as distinct from the attainment of the means, or, in other words, what is implied in the securing of satisfaction, must yet be explained, in order that a full analysis of an act may have been made. This reopens the question as to the nature of the right end of action.

To return, then, from this rather lengthy digression, it may be noted that two distinct questions can be put with regard to the relation of Egoism and Universalism. First, it may be asked—Do people as a matter of fact seek self-satisfaction? To this question the answer has been given, that people not merely may, but in a sense must, seek some form of self-satisfaction. Secondly, it may be asked—Should we seek self-satisfaction? or—Is self-satisfaction in any form the right end of action? It is a patent corollary from the answer to the first question, that this question also must be answered in the affirmative. At once there occurs a difficulty which may be put in the following terms:—'It is apparent that the satisfaction of hunger and the relief of a friend in distress are both forms of self-satisfaction, and it is further apparent that occasions may arise in which gratification of oneself in one way must be the denial of oneself in the other. Now, while no conclusion on the matter in hand could be reached unless particulars were given, yet the popular mind would at once say that, though the eating of food and the relieving of a friend were both in themselves right, yet, if the doing of one means the leaving undone of the other, no man of ordinary intelligence would have much trouble as a rule in deciding which ought to be done. But the philosophic principle that we ought to seek self-satisfaction is unable to indicate which of these two acts should be done, and in that case fails to include all that is found in an everyday

judgment as to right conduct.' This objection is of weight, as it calls attention to the fact that we can and do discern between right and wrong. How is it that ordinarily there is no trouble in discriminating between the good and bad in conduct? The Intuitionist sees no cause for disquietude here any more than elsewhere, and declares that man has a conscience which, in some inexplicable and final way, reveals the distinction between right and wrong. In so far as this declaration insists upon the fact that we do divide between good and bad conduct, it is valuable as reiterating the dictum of ordinary consciousness. As, too, it has been shown that a possibility of an act, whether the possibility be called instinct or impulse or spring of action, implies for a free agent the knowledge of results of action, the method of conscience is explicable as resting upon a long-hoarded and hard-won experience. Thus right and wrong have to do with an estimate of the consequences of an act; but we have not yet found a clue to the content of rightness.

It may be a help towards a solution of the question to ascertain first of all what right conduct is not. An instinct, it has been seen, involves a capacity of the individual, and also the silent but ever-present workings of the society of which the individual is a member. When a man satisfies his hunger, he no doubt seeks to keep intact his own physical nature; nevertheless the keeping intact of his own nature is, to some extent at least, the preservation of the race. Thus every act has a double reference implied in the nature of the individual who is separate from and yet one with his fellow-men. Every act, then, is the expression of the fact that an agent, on the one hand, is a truly independent person, and, on the other hand, has no existence apart from his community. Consequently, wrong conduct cannot in any sense be considered as conduct in which only personal and private ends are sought, since a full view of motive shows that personal and private ends as such have no existence; and right conduct is not that in which an agent ignores his own existence, for that a man should ignore his own existence is a contradiction in terms. While everyone must seek in some way his own satisfaction, he must perforce seek likewise the satisfaction of others.

Desires have been called self-regarding and other-regarding, but this distinction is popular, and ignores in every case an essential factor of a desire. When a man satisfies his hunger with wholesome food, his act is at once self-regarding and other-regarding, inasmuch as it has both a particular and a universal aspect. It is not correct to say that when

the individual is wrong in satisfying his hunger, he is merely self-regarding. Such a statement means only that one must at times regard society from a more adequate point of view than that of continued physical existence. It may be argued that the satisfaction of one man's hunger may result in the starvation of another. True; but, first, that would not be the destruction of the state unless he were a Brobdignagian and all others Lilliputians; and, secondly, and more seriously, his own existence is still the possibility of the continuance of the state. It is absurd to make the division of acts into right and wrong equivalent to the division of desires into self-regarding and other-regarding. Another objection may be raised to the effect that, while acts may be neither purely self-regarding nor purely other-regarding, the individual may wholly refuse to consider the other-regarding aspect, and, therefore, may have purely selfish desires. It is a sufficient answer that, as the individual is unthinkable except in relation to some society, his own satisfaction must mean the realisation of some form of social existence. A purely selfish person is an impossibility, as he would be the embodiment of mere negation, or the personification of absolute chaos. The truth is, not that an individual in considering himself may or may not consider others, but that in considering himself he must consider others. No man can realise a mere aspect of self-satisfaction. The analysis of an act reveals that, though the agent were, in popular language, selfish, the act must of necessity be other-regarding, and even though he were, in popular language, unselfish, the act must be self-regarding. A purely unselfish act would be the total negation of the individual, and a purely selfish act would be the total negation of society; and each of these is an impossibility.

But we are not yet out of the difficulty. Though it be granted that an adequate and rounded view of self-satisfaction serves to prove that the end is neither purely self-referring nor purely other-referring, yet this does not aid in making plain what in any given case is the right end to adopt. It may be that I cannot negate my connexion with society any more than I can negate my individuality, and thus a right act may be demonstrated to be a destruction of neither oneself nor others; yet this gives no information as to any positive characteristic of right conduct. So long as there is simply a great number of ends of action, which seem to have no other bond of union than that each may be embodied in an act, there can be no way of deciding whether any one end is morally preferable to any other, and thus no room

is found for the conception of rightness or duty. Accordingly we are led to ask—Is there an end of action which is connected with all other ends of action in that it is an end, and yet distinct from them in that it is never a means? What, it might be otherwise asked, is that incentive which is in one sense identical with and in another sense exclusive of every other incentive? Some philosophers have chosen to ask—In what way can the love of virtue escape the stigma that it is the love of nothing in particular, and lay claim to being a definite motive? Others have preferred to ask—Is there such a thing as objective or universal righteousness? All are looking for that principle which will give life to the various forms of satisfaction. Consequently these questions reintroduce the general question—What is meant by self-satisfaction?

Already it has been seen that every man seeks some definite way of satisfying himself, whether he be a voluptuary, a sportsman, a family-man, a bookworm or a saint. It was further seen that, since self-satisfaction as an abstraction from all specific kinds of satisfaction was unthinkable, it could evidently never be sought. Moreover it was decided that self-satisfaction might be considered not as the abstraction from but as the comprehension of the various limited kinds of satisfaction, and that this comprehension was not a mere conglomeration of impulses, but comprised a determination of each incentive to its due position. This satisfaction is a truly objective end, and yet may be sought by the individual. In striving to realise it each man is seeking to actualise, not the higher aspect of his nature as opposed to the lower, but the highest aspect as the harmony of all his manifold tendencies. Thus the complete realisation of that end would be the complete establishment of harmony between man and man. From this point of view every agent who acts simply to secure some definite and limited form of satisfaction is asserting his individuality at the expense of a rational society, and is to that extent wrong whatever may have been the nature of the act. He has substituted a means, however lofty, for the life-size character. He who gratifies his passions to the detriment of higher interests obtains a satisfaction, but a satisfaction of an imperfect, not the complete and ideal, self. He who sacrifices his life for the good of others likewise obtains a satisfaction, much more worthy than that of him who yields to his lower nature, but still not the satisfaction of the ideal life. It is not meant that men should not die for others or for their country, but that such an act is not the realisation of the

full-formed ideal. If the identification of oneself with one's country means the severing of family ties and death on the field of battle, then such action may be sweet, but it is not in the highest sense rational. It asserts a higher aspect of man's nature to the total suppression of the lower, and that is logically as absurd as the reverse. The question may be viewed in another light. Every specific form of satisfaction may be considered both as an end and as a means. It is proper, for example, to make the sustenance of physical life an end of action, but to fail to see that it is a means also is to substitute the physical for the whole nature. So is it with any other particular form of satisfaction. It is evident that he who devotes himself to science or the doing of good so unreservedly as to neglect his own physical well-being defeats his own object. Generally, then, the constitution of any specific satisfaction as an absolute end is the exaltation of a single incentive, which is *per se* only the equal of any other, to the position of sole authority, and could as rightly be termed self-destruction as self-realisation.

How then is it possible to get above the region in which spring of action strives with spring of action? Is there a higher region in which strife yields to concord? It is manifest that, unless the race is to cease to exist, care for one's own bodily needs must be at times the paramount duty. Though the cultivation and development of one's æsthetic, mental and moral gifts are loftier employments than the eating of food, yet at certain times the eating of food must be pronounced right as against even them. But the satisfaction of the bodily man need not be made in opposition to higher interests. On the contrary, the due satisfaction of a man's physical wants is the condition of his developing any higher aspect of his nature. "Whether therefore ye eat or drink, or whatsoever ye do, do all to the glory of God." Attention to the relatively lower man is not opposed to but rather an essential factor of the glorification of God. Hence care for the body, when its whole implication is understood, must in fitting seasons not only take precedence over every other motive, but also be in a sense the only adequate actualisation of those motives which are esteemed of higher moral value. It follows that the appeasing of hunger and quenching of thirst are frequently lifted out of their usual relative position to other possible acts and given an absolute position. When this occurs, the satisfaction of the physical nature is right in a sense in which the adoption of no other incentive is right, and there is obtained the true conception of absolute or objective righteousness. Accordingly, the

actualisation of any tendency can be considered from two points of view. First, the incentive in question may be viewed as merely one of a large number of brother tendencies, and the actualisation of such a tendency might be from such a standpoint relatively right. Secondly, the tendency may be viewed as that which is not separate from but comprehensive of all other tendencies, and from this standpoint the actualisation of the tendency must be absolutely right. Every act which is relatively right must be absolutely right also. The difference between relative and absolute rightness is really only in the point of view.

Attention has been directed almost exclusively to the satisfaction of the physical nature, but conclusions in every way concomitant with the preceding results will be obtained by a brief examination of the desire for wealth. Everyone knows that the unlimited indulgence of appetite means the decay of vitality, and so recognises the necessity of restraint. Thus the preservation of the individual is coincident with the preservation of some kind of society. But the due satisfaction of appetite can be most readily obtained by him who has acquired some wealth. Consequently, out of the lower desire, which may be called in general terms the desire for the satisfaction of appetite, arises the higher desire, namely, the desire for some form of wealth. The desire for wealth is higher than a mere appetite, because the desire for wealth implies that the subject of it recognises the necessity for the provision of means for his own continuance. Thus he who desires wealth reflects upon the fact that he has certain bodily needs, and by that very act declares that he is not fully represented as one who has merely the capacity to eat food when hungry or drink when thirsty. He knows that in a sense he remains the same whether he is hungry or not, for it is he who is hungry and he who is satisfied. Thus the individual recognises the fact of his own essential permanence, while his body undergoes alteration. The desire for wealth is one product of this recognition, as it is the desire for the permanent possibility of the satisfaction of appetite. Hence the desire for satisfaction through the possession of wealth on the part of any person includes the endeavour to place society, though it should embrace only himself and family, on a more stable foundation. Yet, since any man's desire for wealth, owing to his limitations, finds no sufficient outlet unless he be on even terms with other persons of aspirations similar to his own, savages of a low type are intelligent enough to admit both the common ownership of rivers and hunting grounds, by all at least

within some more or less clearly defined boundaries, and generally also some rude form of exchange or barter. Therefore, he who desires the satisfaction which accrues from the attainment of property must seek to preserve a community of independent individuals, and to keep inviolate all the regulations of ordinary trade. So it is found that the question of property comes to involve the question of regulations or laws, or it is man's declaration that he is not merely an individual but a man of trade as well. It must carefully be noted, however, that law is not introduced as a restraint of an external authority upon the will of the individual; it is in essence the higher nature of man asserting itself over the lower. Self-satisfaction from this point of view, therefore, would involve the due acquisition of property or wealth, and the due recognition of the rights of others. Further, it is frequently right to carry into fulfilment such satisfaction, right relatively in that it has equal claims with any other incentive, right absolutely in that to fail of it would be to fail of the fulness of the stature of perfect manhood.

The truth, that each incentive has for a time an unlimited jurisdiction is the more easily seen the higher is the incentive estimated. He who, for example, devotes himself to the art of painting must, in order to realise his end, take some heed to his physical condition from the point of view both of health and muscular development. The artist will be unable to body forth his imaginations if he has not a certain and incisive touch. The history of art might be said to indicate, if not to prove, that wonder, if this incentive be the basis of art, creates its masterpieces only hand in hand with reverence. Thus the full value of wonder is not evoked in those cases where it has to struggle with other impulses. Only when it unites into an organic whole all other impulses does it don the purple and gold. So, too, any spring of action, whatever be its nature, when it is in the higher sense of the term 'imperative,' or when it is taken at its moment of completeness, has a jurisdiction over all the rest. He who actualises each incentive only when it is thus imperative or absolutely right, realises at once the limited and the universal satisfaction. He who fails to actualise this impulse, no matter what other impulse he may prefer, may realise some limited satisfaction, but in so doing gains the image at the cost of the reality.

It can scarcely pass unnoticed that the preceding explanation of right conduct has some slight resemblance to the doctrine of Kant, that an individual should so act that the maxim of his will may hold good as a principle of universal

legislation. As every motive implies both a self-reference and a reference to others, and as the completion in act of any motive is the effort of the agent both to preserve his existence and to perpetuate some form of society, it is evident that the principle of any act is suitable for universal legislation. Nevertheless, as the form of society which an agent may seek to constitute may be relatively low, so, although the ground of the act has a universal bearing, the act may not be the fulfilment of what is called duty. It has still to be asked—Is the principle of the agent's will a right principle? Is the form of society sought by the agent the highest or most rational form? If the act is absolutely right, according to the signification given above to absolute rightness, then it is the actualisation of a truly rational society. Further, as the act is the outcome of a tendency which is not isolated but rather gives every possibility its rightful position, this act is likewise the ratification of a society which gives the fullest scope to every power of each individual. The truest conception of absolute rightness can be gained only by a patient study of the relations of civilisation to the varied capacities of man.

There might naturally occur two objections to the foregoing account of the end of action. First, it might be urged that if the desire for self-satisfaction in some form is said to be the right motive, and a universal satisfaction is the right end of action, then the true end is really some kind of feeling, and the true ethics is only a disguised form of Egoistic Hedonism. There is force in the objection in so far as it directs attention to the fact that no end of action could claim permanent recognition which did not emphasise the connexion of the agent with the results of his own act. But when it is remembered that every effort of an individual after self-satisfaction implies in its very essence the desire after some form of union with his fellow-men, it is evident that here the right end is not a mere accident of an abstract individuality. Secondly, it may be objected that the preceding exposition assumes the possibility of conceiving of the absolutely right. The objector may insist that, if an adequate knowledge of objective righteousness is possible only when the highest form of society is thoroughly understood, then our knowledge of universal right must be incomplete for two reasons: first, because the state has not yet assumed its final form, and secondly, because the whole value even of our present life and institutions has not been comprehended. It might be further urged that, if the grasping of absolute rightness or goodness means the complete fruition of all our

capacities, then absolute goodness is not attainable, as our highest attainments are only the possibilities of grander things. The possession of what is fondly imagined to be absolute righteousness is only the key which opens the door to vistas of beauty hitherto unimagined. It is manifest that this second objection also is of considerable weight. It does away with the idea that the realising of absolute rightness is the entrance to a saint's rest, or an immortality of inaction. Moreover, it accentuates the truth that the whole duty of man cannot be summed up in any number of convenient formulæ, but must expand with the expanding race. If, then, the objection means that absolute goodness can never be completely realised, its validity cannot be impugned. Nevertheless, the imperfect and temporary seizure of the absolute is none the less a seizure of the absolute because it is imperfect and temporary. It is not true that, since absolute goodness cannot be attained as a definite state or disposition, no approach whatever can be made to such a disposition. Rather is it true that every identification of oneself with a right course of conduct is a progress towards a completed character. Man or the state at every onward step attains the absolute, but this very attainment reveals the absolute as yet unattained. Thus the truth of the objection is incorporated into the theory when the difference is made clear between the potential and the actual absolute. The potential absolute is the incitement to all mental and moral progress; an actual absolute may well be conceived of as a contradiction in terms.

V.—DISCUSSION.

THE PSYCHOLOGICAL THEORY OF EXTENSION.

By Dr. Edmund Montgomery.

"There is surely no more legitimate or even imperative task than to attempt to explain how body comes to appear as spread out in what we call space"—with these emphatic words the Editor in No. 51 urges the importance of a task which I also have long considered paramount in the endeavour to establish a scientific interpretation of conscious experience. It is undoubtedly a great, if not the greatest, desideratum of psychological science to find an explanation in mental terms for the externality and extension of our bodily percepts. The intuitive distinction between an inner and outer world, between a Self and a Not-self, rests entirely on those peculiar perceptual appearances which detach themselves from the fleeting stream of our mere intensive consciousness as steadfast forms of bodily extension. And as all mental, and therewith perceptual, differentiations are wrought within the unitary sentiency of one and the same conscious individual, we should be able to discover what elementary experiences underlie the trenchant distinction between the extensive and intensive modes of consciousness.

I think with the Editor that the fundamental experience underlying our consciousness of Extension has to be "referred to the tactile base". And I also agree with him—though in a qualified sense—that such consciousness of extension is grounded on our perception of body. It is not grounded on the pure intuition or the psychological construction of *empty* extension. The elements of our perception of space I believe to be given to us in objective experience, along with what constitutes our elementary perception of body.

But is it not certain that to perception our own body is also an object among objects? However intimately connected with our own Self, it also belongs out-and-out to the objective world. Through whatever means we become aware of it, it always appears to us as an external existent spatially determined. And it seems to me that it can be shown that the groundwork of all space-perception is laid through direct awareness—one may say direct *perception*—of the tactile surface of this body of ours.

It is through specific data, given at the tactile surface, that the objective world becomes differentiated within our sensorial medium from subjective modes of sensibility. All the different perceptual characteristics that make up the tactile figurations of the objective world are conditioned by corresponding differences of data arising at the tactile surface. This being so, it must be a datum given at the tactile surface that constitutes the element of space-perception.

Now, I contend that with the consciousness of the simplest sensation arising from any kind of skin-impression, localisation, and therewith space itself, is immediately given; and that all body- and space-perception is only a further modification and complication of such simple tactile experience. It is undeniable, that during the sensory stimulation of mere heat-, cold-, pain- and pressure-spots at the sensitive surface, the simple, specific sensations aroused thereby are felt, or—to express it more precisely—are *apperceived* as distinctly localised affections. Along with the specific sensation, its position is consciously realised. And this experience is, as such, an indivisible mental fact. Skin-impressions of whatever kind are always felt, at once, as occurring at some definite point found to form part of the tactile surface. Consequently, the quality of the sensation does not play an essential part in the localisation.

It is quite true that qualitative differences can be distinguished in the tactile feelings of different parts of the skin, and that these qualitative differences are essential to our awareness and recognition of the different parts of our body; but they are not indispensable to our immediate awareness of the exact position of skin-impressions. To become convinced of this, we need only with closed eyes cross our fingers in odd ways, and lay them thus on a table without paying attention to their relative positions. A prick received on the crossed end of one of the fingers will be immediately and accurately localised, while it will be found puzzling and sometimes even impossible to recognise which finger was pricked. By dint of the immediate awareness of the position of skin-sensations—an awareness awakened in us without objective tactile exploration or the aid of any other objective sense—we are enabled to realise the external form of our body, and the spatial relations of its parts. It will be well to insist upon the importance of these simple experiences; for, properly verified and corroborated, they will positively settle the pending question as to the elements of our space-perception.

Of course, in mental *reflection* the experientially indivisible occurrence can be further analysed. We can distinguish in it the apperceptive focus with its attitude of attention, the line of direction separating the apperceptive focus from the sensation, and the sensation itself at the other end of the line of direction. These three factors, into which the simple and direct psychical experience can be analysed, are moreover found to correspond pretty accurately to three different parts of our complex and roundabout conscious realisation of the physiological basis of the occurrence: the apperceptive focus, to some centre in the brain; the ideal line of direction separating the apperceptive focus from the sensation, to the real or physical line of direction connecting the brain-centre with the stimulated sensory spot; and the sensation itself, to the sensory spot undergoing stimulation.

It is of fundamental importance to recognise that such correspondence *in consciousness* of the direct psychical experience to

its otherwise ascertained physiological basis exists only by dint of pre-established harmony. The direct psychical and the roundabout physical realisation are not—as often maintained—one and the same fact of nature viewed under different aspects. The sensory spot as physical percept is not the same fact of nature as the apperceived sensation arising from its stimulation; the physical line of direction consciously realised in a roundabout way, not the same fact as the ideal line of direction immediately realised; the brain-centre that may be consciously realised as an objective percept, not the same fact as the conscious focus of apperception. Nor are the physical percepts, as such, in any way the cause of the direct psychical experience. The direct psychological localisation of sensations is a fact *sui generis*, not to be derived from our consciousness of physical localisation. I do not perceive a sensation as definitely localised because I may, if I choose, also consciously realise a sensory spot at the same place.

Now it is evident that this immediate psychical localisation of sensations contains already the essential elements of space-perception—namely, externality, direction, distance and position.

The perception of surface-extension, which is generally conceived as the most elementary spatial fact, but which under the aspect here indicated might speculatively be conjectured to be realised through a mental synthesis of felt points already localised—this surface-extension is, however, likewise immediately given in direct apperception, and not synthetically constructed by any activity which may be called a mental process. A stimulated surface of skin is directly apperceived as an extended sensation. I mean thereby that the sensation is thus felt as extended in one and the same *simultaneous* act of apperception. Kant teaches, on the contrary, that, in order to apperceive extension, we have, by force of spontaneous internal activity, first to draw the line of extension; that is, we have to construct extension by running in imagination *successively* from point to point.

Apperception of extension conceived in this manner becomes an immensely complicated mental process; for, after drawing the extended line in successive moments of activity within the lapsing medium of time, we have then to reintegrate the whole by dint of memory, conceiving its elements as simultaneously co-existing in the "synthetical unity of apperception". It should be clear that, in this way, we can attain only to a *conception*, never to a *perception*, of extension.

And here we are brought face to face with a fundamental dilemma in the interpretation of experience—a dilemma which has ever divided and is still dividing philosophers into two opposite schools—*viz.*, a school which makes sensible experience subordinate to conceptual knowledge, and a school which believes conceptual knowledge to be subordinate to sensible experience.

No doubt, if it were true that it is through a process of mental synthesis, and not through the immediate apperception of sensible positions and extended sensations, that we realise what appears

to us spread out in space, then our percepts would all be out-and-out constructed by spontaneous mental activity. And sensible experience, being thus really a mere product of thought-activity, could have not only no relation to a world beyond our skin, but no relation to our skin itself, or indeed to anything external to and independent of the synthetical activity of our intellect.

Kant's fundamental mistake here was to believe that we receive sense-impressions *passively;* that the domain of sensibility constitutes an inert, indeed an insentient, non-intellectualised province within the realm of mentality. With him even percepts or "appearances in space and time" had no necessary, inevitable connexion, no organic unity with the act of their perceptive realisation. It is obvious, however, that a percept is, as such, always perceived. Active perceptive realisation, on the part of the individual having the percept, is of the essence of its perceptual nature. Even a sensation, to be at all felt, has likewise to be actively perceived, *i.e.*, consciously realised within the focus of apperception. In fact, we react against sufficiently powerful sense-impressions with the full activity of our apperceptive faculty. Still it is not this centrifugal activity which originates the specific sensations or percepts.

The fundamental distinction here to be drawn lies not between passive perceptual appearances and their conceptual realisation and classification through mental activity, but between the direct *perception* of things and their indirect *conception*. Both these modes of apprehension are active functions; the former being more vividly and constrainedly, the latter more comprehensively and freely, active.

It is true, when a considerable extent of skin is simultaneously stimulated, we can fix the central point of our sphere of apperception first on one spot and then on another of the extended sensation. And we can also realise more distinctly the extent and form of the stimulated surface by successively running over the different parts of the extended sensation with the central point of our apperceptive focus. But most assuredly we do not *create* the extension by such activity. We merely explore it, and enhance thereby our apprehension of it. The apperceptive focus plays here the part of an ideal eye or finger-tip. And it is this centre of our perceptive and explorative faculty that controls, as its chief physiological instruments, our eye and tactile organs.

The apperceptive focus of tactile sensations falls very nearly together with the visual focus. Indeed, we always feel a sensation connected with muscular movements of the eye when we pay close attention to skin-sensations. But, as we can pay attention to and accurately localise sensations occurring at parts of our body never perceived by the eye—for instance, at the back of our head—the focus of tactile apperception cannot entirely fall together with the focus of visual apperception.

In our search after the psychological elements of space-perception, we have not found that sensations connected with

muscular activity play a very prominent part. They seem involved only in the apperceptive phase of the perception. That which is apperceived as occupying space, or rather as determining position and constituting extension, turned out to be simple skin-sensations. These sensations or apperceived affections, by appearing to us externalised, localised and definitely extended, must be held to belong already to the objective order, and to contain therewith the psychological rudiments of body-perception. Yet, by being immediately apperceived as psychical phenomena inalienably attached to our own self, they do not possess the movable independence nor the objective resistance of complete bodily percepts.

When we press, say, the blunt end of a pencil upon the quietly resting tip of our fore-finger, and fix our attention on the sensation of pressure, we apperceive the sensation, as such, distinctly extended, and vaguely recognise the shape of a circle; which shape becomes, however, quite distinct when the pencil is whirled round without changing its position. So long as the finger is kept perfectly still, no *sensation* is received which renders us conscious of the presence of a pressing body. But the instant we assume the attitude of physical exploration by pressing upon the stimulating object, instead of being merely pressed upon, the bare circular sensation becomes transformed into the sensation of a circular body. We apperceive the presence of body detached from the bare sensation of pressure. We recognise something capable of yielding us specific percepts when examined with our organs of physical exploration.

In apperceiving bare tactile sensations, our activity consists in an inward resistance and reaction against the encroachment of stimulating influences. In apperceiving bodily presence by touch, our activity becomes an aggressive exploration of the stimulating influences—an exploration which the latter are now felt to resist. The awakened percept in this case includes the peculiar sensation called objective resistance. And we find that this sensation comes to us when under certain conditions we venture upon the physical exploration of the immediate sensorial percept. In a roundabout way we then make out that this peculiar experience of objective resistance, which is transforming so suddenly and strangely the apperception of a bare extended skin-sensation into the apperception of a congruent, space-occupying body, is due to muscular activity.

Our muscles are not only motor organs: they are also sensory organs of a specific kind. This is experimentally proved by their power of estimating differences of weight even more accurately than the skin. The principal peculiarity of muscle-sensation lies in the fact that it is an activity not only peripherally but also centrally stimulated. The central stimulation, unimpeded, would produce movement; the peripheral stimulation arrests the movement. In the sensation of objective resistance the peripheral and the central stimulation encounter each

other along the line of excited activity, and measure themselves against one another. Unimpeded muscular action remains unfelt. Inactive muscle does not appreciate resistance. It is the active muscle peripherally impeded which feels resistance, or rather which furnishes the sensorial data of such feeling.

We may look upon voluntary muscular action as the physical aspect of apperception. And this centrally initiated activity becomes an objectifying process by making use of its instruments of physical exploration for the purpose of gaining a more thorough experience of directly apperceived sensations or other more complex modes of perceptive awareness. It becomes furthermore a process of objective construction when it transforms, by means of its peripheral organs, mere ideally conceived perceptions into real perceptions, utilising for the purpose sense-stimulating material found ready at hand. As sensory organs, used by our faculty of apperception, our muscles impregnate tactile percepts with the specific sensation of bodily resistances; as motor organs, they realise its ideal mandates in the objective world.

The further momentous part played by muscles and their central connexions conjointly with tactile organs *during physical exploration* is of the highest psychological as well as physiological interest. I have endeavoured to elucidate this in my article on "Space and Touch" in Vol. x. of MIND, and have at present nothing more to add.

Hempstead, Texas, 1st August, 1888.

NOTE.—Dr. Montgomery's contribution to the discussion of this question is very welcome, and the more because it comes so promptly from the far-off region where his abode has long been fixed, but which is not too remote for him to watch everything that goes on across half a continent and a whole ocean. Reserving other remarks on what he has written till it is seen how far the discussion may proceed later on, I will now only say that I wholly agree with him in the importance he attaches to the sensitive skin as the first of our objective percepts and medium of all farther external perception. It is there as a sort of permanent foot-rule—but spread out continuously in all directions with most varied graduations—by which at once to apprehend and measure-off the extension of all objects coming into contact with it. I venture to differ from Dr. Montgomery, however, on the point of whether, for its use in this way, we are bound to suppose its perceptive faculty to be native and original, and not rather acquired by a process of gradual mental construction,—or, if not properly acquired by the individual *ab initio* (which it is hard to see how we can ever know), still appealing to the psychologist as a problem to be set and solved scientifically. And if I did not, in No. 51, refer to this feature of our perception of Extension, it was only because it did not seem particularly involved in the question then taken into view, *viz.*, whether the extension we first perceive is not of extended body rather than of empty space. I certainly hold that the first extended body we come to know of with any precision is the one we end by calling our own,—and there are very good psychological reasons for this.

EDITOR.

HEGEL AND HIS RECENT CRITICS.

By R. B. Haldane.

The history of literature shows that upon the whole justice has been meted out with a fairly even hand to philosophers. If a great thinker has received too little recognition in one period, he has generally bulked too largely in the public estimation in another. And if he has exercised an excessive influence during his lifetime, he is tolerably certain to be altogether underestimated at some time afterwards. In the long run, the exaggerations alike of merits and of demerits become corrected as the name to which they relate ceases to be a party-badge. Until, however, there is no longer a motive on the one hand for abusing all that is associated with that name, and on the other for declining to admit its connexion with error even in matters unessential, a fair verdict on the services of him who bore it to the cause of knowledge is hardly to be looked for.

Hegel seems to me to belong too nearly to the present generation to be fairly dealt with. While he was alive his philosophy was regarded as a revelation. For some time past it has been the fashion, if not to deny that there is any merit in it, at least to regard with grave suspicion all those who make the admission that it has influenced their ways of thinking. The merits of Hegelianism are in short still a party-question. And this is scarcely to be wondered at. For Hegelianism has been used by its founder, and still more by his disciples, not merely as a point of view from which to criticise other modes of thought, but as ground upon which to place props for speculations in both ontology and theology. This circumstance may afford good ground for blaming individual philosophers; it cannot justify the inference that, because some of these props are rotten, therefore the ground on which they have been placed is likewise rotten. And yet this is just the inference which recent critics of Hegel, such as Mr. Balfour and Prof. A. Seth, would appear to wish to have us draw.

The purpose which I have ventured to set in front of me in what follows is twofold:—to endeavour to indicate what it is that some who believe in much of Hegel's work think that he has done, and not less to indicate what these same people think he has not done; to define in outline the claim on his behalf, and to repudiate a great deal that is attributed rightly or wrongly to him, but unquestionably wrongly to the Neo-Kantians. What I complain of in the recent criticisms referred to is that they have sought to fasten on the Neo-Kantian school in this country doctrines which have been professed only by certain of its adherents, and have ignored what is its distinguishing feature.

Mr. Balfour has given us (Mind ix. 73) a definition of Neo-

Kantianism which is substantially sufficient: "The members of this school are bound together by the common conviction that the solution of the larger problems of philosophy is to be sought along the path which was opened out by Kant, and further explored by Kant's German successors". In other words, it is a similarity in method rather than creed which binds the members of this school together. Now that method I take to be capable of being described very shortly. It accepts Kant's criticism of Hume. But it goes further than Kant in asserting that not only can we not go outside the closed circle of consciousness, but that there is no outside which has really any meaning. All that is, is for—not the self which is a particular object in space and time, nor yet any transcendent self, but—knowledge. And this is asserted not as a metaphysical or dogmatic statement, but as the result of that same new question which Berkeley put to himself. Now the great advance which Hegel made upon Kant was in the results he got by turning knowledge to the investigation of its own nature. This result lay not so much, as it appears to me, in the rejection of the doctrine of Things-in-themselves, or even in the development of Kant's doctrine of the Categories, as in the recognition that those features of experience which Kant relegated to the *Critique of Judgment* and to the ideal region of Ethics were just as much part of experience as the Categories of Kant themselves. Real experience was limited for Kant by the possibility of expressing its relations in space and time, and consequently such apparent phases of it as organisation and adaptation had to be relegated to the regions of unreality. It may be true that one result of these and the like points in the *Critiques* is that, as Prof. Seth points out in his *Hegelianism and Personality*, the Thing-in-itself of Kant is quite different from a mere ontological construction, and is really the indication of a deliberately recognised limit to the scope of his method. It is probable that Kant has been a good deal misunderstood on this point. But it is equally true that, whether Hegel did or did not afterwards go on to erect into a Divine Existence a synthetic Unity, which was with his predecessor a principle adopted merely because apart from it experience was inexplicable, it was not necessary to Hegel's theory of knowledge that he should do so, nor was it in any way implied in his rejection of the Thing-in-itself. What is essential in Hegelianism is its mode of investigating knowledge itself. What philosophy has gained from Hegelianism is a demonstration of the mischief which arises when categories which are applicable in a certain way are indiscriminately applied in every other. It has taught those who believe in it, or at least they ought to have learned, not to look for the self which makes experience possible under a category of substance which is proper only for objects in space and time, nor on the other hand to rest content with the expression 'subject' without assigning to it a meaning. And its warning against current assumptions

and metaphors extends not only to philosophy but to the metaphysics to which men of science are so often unconsciously a prey. Hegel may have been wrong in his statement of the relation of the categories of teleology to those of mechanism. But it cannot be right simply to assume that all the phenomena of organisation must be reducible to mechanism, or capable of expression in relations of space and time. Again, for example, this method has shown new reasons for doubting the application of the category of Cause to the experience of Volition, and consequently the foundation of the old controversy about free-will.

The service rendered by Hegel to philosophy is really of a negative nature. By teaching us how to criticise our categories he has rendered a lasting service not only to those who have been deceiving themselves in the search for the solution of what Mr. Balfour speaks of as "the larger problems of philosophy," but he has put people on their guard in almost every department of research. I admit that Hegel has, after the fashion of his time, gone further and professed to found a system that savours suspiciously of Ontology. But the point is that, though Hegel and the Hegelians may have committed themselves to this system, it is separable from what comes first in his work and has been adopted by the Neo-Kantians. I am not concerned to dispute with Mr. Balfour and Prof. Seth the force of their attack upon the metaphysical basis of Green's ethical system. Not only Green, but also Hegel himself, appear to me often to fall into the very fault which they are continually condemning—the indiscriminate use of metaphors as the foundation of inferences which, on their common principles, are illegitimate. The theory of knowledge becomes, in their hands, over and over again transformed, as Prof. Seth rightly remarks, into a metaphysic of existence or absolute philosophy, in which a transcendental self, which for this theory has no meaning excepting as the implicate of all experience, is hypostatised first into an absolute subject, and presently into an absolute cause. If anyone were asked to indicate the kind of contribution which Hegelianism (in the restricted sense in which the Neo-Kantians adopt it) has made to philosophy, reference might be made to Mr. F. H. Bradley's article on "Reality and Thought" in MIND No. 51. Mr. Bradley, like many other sober-minded people, would probably not care to be called an Hegelian. But his essay, though it bears on every line of it the mark of independent thought and work, appears to me to be a piece of the purest Hegelianism which has been produced for some time past. His problem is to ascertain the nature of the reality which there is in the object of knowledge over and above ordinary knowledge itself. The question is, he justly says, not whether the universe is in any sense intelligible, but whether if you thought it and understood it there would be any and what difference between your thought and the thing. He agrees of course that thought and fact, in the ordinary sense

of thought, are not the same. But his analysis leads him to the conclusion that what constitutes the difference is not the presentation of some element itself of a foreign nature on which thought works, for such a presentation and such an object he finds alike meaningless, but the fact that thought does not as we find it in our experience exhaust the predicates of the subject of its judgments or present these contents in the form of individual existence here and now.

" The object of thought (says Mr. Bradley, p. 380) aims at possessing the whole character of which thought already has the separate features. These features thought cannot combine satisfactorily, though it has the idea and even the partial experience of their complete combination. And, if the object succeeded in its aim, it would *become* reality; but it would cease to be an object. It is this completion of thought beyond thought which remains for ever an Other. Thought can form the idea of an apprehension, something like feeling in directness, which contains all the features desired by its relational efforts. It can understand that, in order to attain to this goal, it must get beyond relations. Yet it can find in its nature no other way of progress. Therefore, to reach its end, it perceives that this essential side of its nature must somehow be merged, so as to take in the other side. But such a fusion would force it to transcend its present self—how in vague generality it does apprehend; but how in detail it cannot understand—and it can see the reason why it cannot. This self-transcendence *is* an Other, but to assert it is *not* a self-contradiction."

Mr. Bradley gets at this result in his own way and in his own language. He has retraced the steps which Hegel first took, and carefully scrutinised the ground anew. But the pilgrim carries the same staff. The passage I have quoted, and indeed the whole article, might have been written by any Hegelian, whether of the left wing or the right. For it depends on what will remain in Hegel after the world has ceased to dispute about his metaphysics and theology,—the new method which he elaborated for the investigation of the contents of consciousness. Outside that consciousness we cannot and need not get. And we need not and we must not assume the existence in any ordinary sense of an absolute intelligence in which thought and its object would be one and the same. Hegel having got thus far did go on further and develop a systematic exposition of the nature of such absolute intelligence. But with this further portion of his system Neo-Kantianism, as such, is not concerned. Kant declined to identify the logical unity of thought with a divine or creative self; Hegel was under no greater necessity of making the identification. In consciousness he found thought as we know it confronted with a reality which never could be expressed in terms of any judgment of such thought. It might be the only way of explaining this otherness to refer it to the difference between thought as we find it in the individual and an ideal kind of thought, but it was not necessary to the method, or even a legitimate consequence of its application, to identify this ideal with Divine Existence. What-

ever Mr. Balfour and Prof. Seth may say, this identification is *not* the central tenet of Neo-Kantianism. If reference is to be made to the works of Green, his Neo-Kantianism must be looked for in the *Introduction to Hume* rather than in the *Prolegomena to Ethics*.

Turning to Prof. Seth's book, what I complain of is not merely that he has ignored what is characteristic of Neo-Kantianism, but that he has represented it as insisting on the worst features of the superstructure reared not merely by Hegel himself but by Green. It may be quite right to attack Hegel for having called his Absolute the legitimate outcome of Kant's Criticism. It may be quite right to show that Green gets to his Universal Spirit only by an abuse of metaphors. But for the rest the book is misleading. One would have expected the author of the essay on "Philosophy as Criticism of Categories" to have been most careful while condemning what was bad to separate out and defend what was good in the source of his own inspirations. And yet it is only at the end of the book, in the concluding words of a chapter which contains a lecture to the gallery, that Prof. Seth has anything approaching to a good word to say for the Hegelian method. He is a Neo-Kantian himself, excepting, indeed, where he seems to hint that Things-in-themselves may be resuscitated in the form of Monads; not, it is true, a Neo-Kantian in the sense of maintaining the doctrines which he associates with Neo-Kantianism, but in the sense that, in common with Mr. Bradley and Green, he in reality bases his method entirely on that which Hegel elaborated out of the critical method of Kant. Prof. Seth has done well to cut himself adrift from Hegel if by this is meant the ontological developments of Hegel's results. But he would have done better if he had distinguished in Hegel the method from its applications, and not thrown, as he seems to me to have done, the mind of the philosophical public into confusion by declining to say that he is neither Hypothetical Dualist, nor Natural Realist, nor disciple of Lotze—nor defender of any of these ways of looking at things to which his own methods allow but short shrift. So far as I can judge, the real position of Neo-Kantianism in this country has not been touched either by Prof. Seth or by Mr. Bradley, who is its friend at heart, or by Mr. Balfour, who is only a half-hearted enemy. I believe that it will yield further and valuable results; not, it may be, in pure metaphysics, but in such investigations as Mr. Bradley has himself undertaken, and above all in the hands of those scientific specialists who are becoming alive to the necessity of a criticism of their Categories.

VI.—CRITICAL NOTICES.

A Study of Religion: its Sources and Contents. By James Martineau, D.D., LL.D., Late Principal of Manchester New College, London. 2 Vols. Oxford: Clarendon Press, 1888. Pp. xx., 417; vi., 410.

This work and *Types of Ethical Theory* are not only the latest but the richest fruits of their author's long and eminent literary life. They supplement all his previous writings, and put us in possession of his whole system of thought on ethics and religion. They give us the truest measure of his power, and show us the farthest reaches of his attainments in the two regions of philosophy in which he has laboured for so many years with such admirable devotion and to such conspicuous effect. They have arrived late, but not in the least too late. The burden of his more than eighty years doubtless weighs on their author's bodily frame, but it has certainly not impaired his powers either as a thinker or a writer. In neither work are there any traces of octogenarian feebleness or Nestorian prolixity. They are long, but no one will wish them to have been shorter. The thought is clear, flexible and penetrating; the feeling fresh, serene and elevated; the style bright, firm and graceful.

This *Study of Religion* may even seem to some to have appeared too soon. It would have made so admirable a Gifford Lecture that one may well regret it has not appeared as such. More generations than the present may wait in vain to see the Gifford Lectureships produce anything so good.

While the reviewer is far more inclined to praise the book than to criticise it, as the former would be useless work and the latter is the task in hand, he will sacrifice pleasure to duty, and be as critical as his sense of truth will allow him to be towards a treatise with the general tenor and argument of which he is cordially in sympathy and agreement.

The title of the book cannot seem accurate to those who do not accept Dr. Martineau's definition of 'religion'. Those who have adopted the wider conception of it at present prevalent will naturally expect to find in the work much which is not there. To them the title will suggest a study of religion as a fact of experience, an analysis and exposition of it as it manifests itself in the individual mind and in society, a psychology of religion. This they will not find. The work is essentially an inquiry into the theoretical truth or logical validity of religion—an exposition of the ultimate rational grounds of religious belief and practice—a discussion of the bases and a defence of the conclusions of Theism. It deals with the psychology of religion only in so far as it must take account of certain cognitive elements necessarily

implied in all conceivable apprehension of religious truth. Dealing with these to a considerable extent does not make it a study of religion itself, purely and simply as a phenomenon, or prevent its being essentially and throughout an attempt to vindicate religion by showing that it rests on objective spiritual truth. It is to be included among works belonging to the department of Theological Apologetics. In more general terms, it is not an investigation in the sphere of positive religious science, but in that of metaphysical religious philosophy.

The foregoing observations seem necessary to indicate the precise character of the book under review. They are, of course, not meant as an objection to it. Dr. Martineau had every right to give us this book and not another. And although there may be more original work to be accomplished in the psychological than in the apologetic department of theology, there can be no doubt that those fundamental problems of Theological Apologetics with which Dr. Martineau occupies himself so strenuously are of vast significance. On their solution it must depend whether religion is to be regarded or not as more than a mere historical and psychological phenomenon, whether the beliefs which it contains are legitimate or illusory.

The 'Introduction' deals with two questions—What is Religion? and, Why Ethics before Religion? The former Dr. Martineau answers offhand, without any analysis of the relevant facts or comparison of his definition with them; without any of the historico-psychological investigation into the nature of religion which we have of late become accustomed to expect from those who undertake to tell us what religion is. He begins thus: "The word 'Religion' is here used in the sense which it invariably bore half a century ago; and a reader whose conceptions are cast in the moulds of that time will know what to expect from an inquiry into its 'Sources and Contents'". He proposes, accordingly, to understand by it—"belief in an Ever-living God, that is, of a Divine Mind and Will ruling the Universe, and holding moral relations with mankind". Then he devotes the section to a criticism of sundry "proposed rhetorical extensions of the word Religion," and especially of that "watering down of its meaning, so as to dilute it to the quality of the thinnest enthusiasm," given us by the distinguished author of *Natural Religion*.

Now, on this it may be remarked that a few sentences on the definition of religion are fortunately the only sentences in Dr. Martineau's book which show any traces of his having written for readers "whose conceptions are cast in the moulds of half a century ago". It would have been strange if it had been otherwise. Throughout the whole period he has been thinking and writing beyond the comprehension of such readers, and has got far beyond touch of them now. They will take care to find teachers less likely to break the old forms in which their thoughts

were moulded. Any definition of religion, however, which is merely a repetition of the old *modus Deum cognoscendi et colendi*, and which consequently identifies religion with theistic belief and worship, is antiquated by at least half a century, and by a half-century equivalent in such a matter to any preceding five centuries. The word Religion was not so understood by Latin classical writers. It has not been invariably so understood by philosophical writers ever since the Renaissance. And, although almost invariably so employed by divines down to nearly the last fifty years, it was with the great reservation and restriction implied in the admission that it either did not apply at all, or only, as some of them said, 'improperly applied' to false religion. What has led, however, to its general abandonment is undoubtedly its manifest inapplicability in those historical and psychological departments of theology which are mainly the creations of the past half-century. The distinction of true and false religion is fundamental in Apologetic and Dogmatic Theology, but it has no place or relevancy in Historical and Psychological Theology. For these last, false religion is as truly religion as true, seeing that for them the distinction between true and false religion has no significance, no existence. It is difficult to see how those who cultivate the comparative and psychological sciences of religion in a scientific spirit can be satisfied with any definition similar to that given by Dr. Martineau. The objection to them is that they exclude far more than merely "rhetorical extensions" of the meaning of the term Religion. They take no account of the greater portion of the undoubtedly real and historical manifestations of religion. They are only applicable to one of its forms. The adoption of Dr. Martineau's definition of religion would require whole departments of inquiry to be abandoned as non-religious, although now universally and very properly included among theological disciplines. At the same time, it must be admitted that the definition does scarcely any harm in Dr. Martineau's own book, or even in the first section of its 'Introduction'. The reasons which he adduces against what he calls "rhetorical extensions" of the term are fortunately not drawn from the definition of religion given but from the real nature of religion. Hence the validity of the reasons are not dependent on the accuracy of the definition. They seem strong reasons, and they are stated in a way which does them full justice.

The second section of the 'Introduction' is meant to be an answer to the question—Why Ethics before Religion? If the term Religion, however, be understood in the way approved of by Dr. Martineau, that is, as equivalent to Ethical Theism, the question can hardly be worth putting. Obviously, if there were no Ethics there could be no Ethical Theism. Obviously, Ethics must precede Ethical Theism. If, on the other hand, the word be understood in a wider sense, the question—Why Ethics before Religion? ought manifestly to be preceded by the question—Is

Ethics before Religion? But this latter question Dr. Martineau does not raise, and his reasoning in the section implies no answer to it. He shows how the moral consciousness of civilised man influences religious belief and feeling, and how these again react on the moral judgments and moral life; not in the least that Ethics precedes Religion either in fact or thought, history or theory. The relation between Ethics and Religion has never been proved to be one of sequence at all. Man is not moral before he is religious or religious before he is moral, inasmuch as he is equally both moral and religious by the very constitution of his nature. To trace how variously religion and morality have been related in different periods, stages and circumstances would be a vast task, but assuredly their relation would never be found to be that of before and after. Even moral and religious science have never stood to one another in so simple and narrow a relation as that. There are defects, therefore, in this section of Dr. Martineau's work. It is not so thorough and comprehensive an exhibition of the relations of morality and religion as he might have given us. Yet what is chiefly attempted in it is really accomplished. As an argument against those who would either represent religion as independent of morality or morality as independent of religion, it is as effective as any general statement could well be. The inter-relations of Ethics and Religion considered in their whole extent either as historical manifestations or as systems of belief and reflection are not traced, but certain links of connexion between them of a kind specially necessary to be recognised in a study of the sources and the contents of theistic faith are clearly indicated.

The philosophical defender and exponent of Theism in the present day inevitably finds himself under the necessity of dealing with the doubts and negations of Agnosticism. The necessity is in various respects a hard one. The great majority of mankind are quite incompetent to decide on the merits of a discussion as to the limits of human knowledge. The discussion once raised cannot be confined within any definite sphere. Agnosticism as to religion is but one species or phase of Agnosticism, and it can only be either refuted or confirmed through the refutation or confirmation of Agnosticism in general. The Theist, however, is at an obvious disadvantage in not being allowed even to produce his reasons for Theism until he has propounded and established a theory of cognition in all its forms, and implicitly or explicitly disproved all agnostic theories. Then, the subject is so large that a brief treatment of it must be unsatisfactory. The eloquent, or at least rhetorical, generalities which the ordinary reading public accepts as appropriate to the consideration of Agnosticism are worse than useless. A thorough theoretical investigation of it implies the setting forth and defence of a whole system of Philosophy as the Criticism or Science of Knowledge. And even the most elaborate theoretical investigation must in itself appear

vague and inadequate. Agnosticism in general and in the abstract can be as little attacked as defended with success. War against Agnosticism is unreal and must be resultless unless its chief systems, at least from Hume's onwards, be individually dealt with.

Dr. Martineau devotes Book i.—"The Limits of Human Intelligence considered"—to dispel that "despair of religious knowledge" which is in the present day the chief enemy to religious faith. He adopts in it a mixed method of procedure, partly historical and partly abstract, partly criticism of individual systems and partly criticism of general propositions. There are four chapters in the book. The first, on the forms and conditions of knowledge, is substantially a brief statement of Kant's theory of knowledge; the second is "an appreciation" or criticism of that theory; the third treats of "absolute and empirical idealism" as represented by the systems of Fichte, Schelling, Hegel and Schopenhauer, and of the explanations of belief in the external world given by Helmholtz and J. S. Mill; and the fourth deals with the doctrine of the relativity of knowledge, or rather with certain sceptical modes of expressing the doctrine. There is a lack of consistency and a still greater lack of comprehensiveness in this mode of treatment. Hence this first book appears to the present reviewer to be the one considerable portion of the work which, while containing excellent pages, is unsatisfactory as a whole. It deals only with fragments of the subject professedly discussed, and with these, if by any rule of proportion, according to one far from visible. The cause is, no doubt, to be referred chiefly to the difficulty, or even impossibility, of treating it according to any consistent and comprehensive plan within the limits of a hundred pages.

Perhaps, a beginning should rather have been made with Hume than with Kant, as the former was the true initiator of the Agnosticism which has prevailed throughout the present century, and, on the whole, a greater and a more consistent Agnostic than Kant. Dr. Martineau represents at a length which may seem relatively excessive Kant's doctrine of Analytic and Synthetic Judgments, his account of Mathematical Judgments, and his view of the tests of the truth of Synthetic Judgments. This is, however, because he substantially agrees with them, and rejects only the Kantian conclusion that the *a priori* forms of sense and thought are merely subjective, and hence that they and all their contents are only mental representations due to the constitution of our sensibility and intelligence. Dr. Martineau admits the subjectivity of space and time, but, like Trendelenburg, denies that this prejudices their claim to objectivity. They are, he thinks, both subjective and objective. "Nothing," he conceives, "stands in the way of our trust in the *bona fides* of our intuitive witnesses to a world beyond the contents of our own consciousness." More than a trust, however,

he does not hold that we can attain. The reviewer cannot here do more than indicate the measure of his dissent from these positions. He does not accept Kant's mode of distinguishing cognition into *a priori* and *a posteriori*, holding that in all cognition there is an *a priori* and *a posteriori*, and that although Kant often touched this truth he never firmly grasped it, and hence classified cognitions in a way inconsistent with it. He admits that Kant, through his distinction of judgments into analytic and synthetic, was enabled to state the fundamental problem of knowledge in a general and suggestive form, and to recognise that knowledge is an essentially synthetic process, yet he deems the distinction itself as enunciated and illustrated by Kant to have been hopelessly confused and erroneous. Dr. Martineau seems to regard it as not needing justification. Renouvier, Stirling and others have tried to explain and defend it. While granting that it has a limited logical validity, the present reviewer agrees with those who find themselves unable to accept almost anything which Kant has said about it, and who have never been so ably represented, perhaps, as by Ausonio Franchi in his remarkable monograph on the subject—*Sulla Teorica del Giudicio*. Again, Dr. Martineau accepts Kant's doctrine that time and space are necessary but subjective forms of knowledge. To escape the difficulty, however, of regarding them, "with all their infinitude, as lodgers within us," he has recourse to the Trendelenburgian hypothesis that notwithstanding their proved subjectivity we may believe likewise in their objectivity. How they are to be distinguished as subjective and objective he does not explain. Are there two species of space and time? Are there two essentially different ways of getting at the knowledge of space and time? Are space and time both necessary and contingent as well as both subjective and objective? How can we pass in cognition from the space necessary to thought to a space outside of that space and of the thought in which it lodges? It is not by Trendelenburg's device that the implicit Agnosticism of Kant as to space and time is to be met, but by insisting on receiving real proof for the dogma that space and time are subjective. They are so in no intelligible and non-sophistical sense. We can neither know nor conceive of any space or time supplied to the mind from within. We know them only as objectively given to thought, not as subjectively contained in it. Kant assumes necessity in knowledge to spring from subjectivity. In reality the subjective is only a source of contingency. No form or condition of thought is in thought, otherwise it could not form and condition thought. We know only the time and space in which we are. Without undervaluing the elaborate attempts which have been made in this and other countries to elucidate Kant's doctrine of time and space and other necessary forms of thought, we may reasonably hold that they fail to show that he has proved the subjectivity of these forms. Kant's theory of belief in an external world seems to us

to be estimated too favourably by our author. The theory has the merit, indeed, of recognising the complexity of the act or process of perception; but it is incorrect in tracing back the belief in externality exclusively to causality. The axiom of causality—Every change has a cause—presupposes time and space, for change is only an event in time or space, and, therefore, it presupposes the externality or objectivity of time and space. If space and time be only known as objective we shall hardly be content, as Dr. Martineau seems inclined to be, to regard our recognition of externality as a mere belief or a trust which, being deeper than reason, can dispense with reason. We must, on the contrary, deem the belief in it belief in directly apprehended truth—the trust in it trust in the reason which is the basis of all reasoning.

Despair of religious knowledge being the subject of book i., we scarcely expect to find the third chapter devoted to "Absolute and Empirical Idealism". It seems as if it would have been more relevant to have treated of Post-Kantian Agnosticism, which has already had so many phases and stages. Idealism is not necessarily either gnostic or agnostic, but is more apt to be the former than the latter. Belief in the subjectivity of time, space and other forms of thought inevitably involves Agnosticism; belief in their objectivity in no way implies the rejection of Idealism. Idealism has not definitively conquered Realism, but still less has it been conquered by it. Agnosticism is not more the enemy of Idealism than of Realism. It is the enemy of all philosophy. The first section of the chapter brings before us the forms of Idealism associated with the names of Fichte, Schelling, Hegel and Schopenhauer. The pages devoted to Schopenhauer are the most satisfactory. Fichte's Idealism is represented as having been originally a merely Subjective Idealism. Dr. W. L. Courtney's expression of doubt as to the correctness of this view is held to be unwarranted, and Schelling is credited with having led Fichte to perceive that the Ego of personal experience could not be the Absolute. On this point Dr. Martineau has undoubtedly the general opinion of the historians of philosophy on his side. The truth, however, is, we believe, on Dr. Courtney's side. Fichte from the first sought philosophic unity of principle, and never was so absurd as to suppose that it could be found in the multitude of personal individualities or in any one of them. The implicit first of the *Wissenschaftslehre* was not the Ego of personal experience, the finite, intelligent, personal Ego, but the infinite and impersonal Ego, which is the ground and source of individuality and consciousness; and the explicit last of the doctrine was the universal, impersonal, moral *Ordo ordinans*. Schelling gave currency to the notion that the Doctrine of Science was a Subjective Idealism, and it was plainly his interest so to represent it. Whether he altogether believed his own representation has been doubted. If he did, it only proves

what Fichte maintained, that he had never been able to understand the system for which he undertook to provide a substitute. The relation of Schelling to Fichte was quite other than is commonly supposed. The cause of the success of Schelling's misrepresentations, and of the consequent prevalence even at present of erroneous views as to the nature of Fichte's philosophy and its relations to subsequent philosophies, is simply that the *Wissenschaftslehre* is among the most difficult systems to master which have appeared in the whole history of philosophy. Hardly anything has tended so much to mislead the world as to the significance of the development of modern German philosophy as the popularity unhappily acquired by the formula that Fichte taught Subjective, Schelling Objective, and Hegel Absolute Idealism. In the second section of the chapter under notice the examination of J. S. Mill's psychological theory of belief in an external world (pp. 98-112) must be indicated as particularly worthy of consideration by those who have adopted the theory. To almost all who have not it will appear a conclusive refutation. It is certainly a keen and vigorous piece of criticism.

The fourth chapter discusses the doctrine of the relativity of knowledge in the three forms of (*a*) *Homo mensura*, (*b*) All we know is phenomena, and (*c*) the Unknowable. It is especially in this chapter that philosophical readers must feel that Dr. Martineau has done himself injustice in not allowing himself more space within which to work. The chief position from which the reviewer would expressly dissent is that, while the doctrine of relativity does not preclude our knowing noümena properly understood, it is not consistent with our knowledge of the Absolute. This should not be conceded. The affirmation of the relativity of knowledge excludes knowledge of the Absolute only when carefully defined, as it was by Hamilton and Mansel, with a view to secure the exclusion, and when that is done all knowledge must logically be held to be merely phenomenal as well as exclusively relative. Only the unconditional conditions of thought can properly be held to be noümenal, and these may all with equal propriety be held to be absolute. The Absolute understood as that which exists out of all relation is, of course, inconsistent with the relativity of thought, inasmuch as it is inconsistent with thought itself, pure absurdity; but the Absolute has none the less a very important and consistent meaning, and when so understood it is inclusive of all that is unconditioned and noümenal, the light of all reason and ground of all intelligibility, and the source and complement of all that is relative and phenomenal. Dr. Martineau, adhering to a definition of the Absolute which it is strange that anyone should ever have adopted, does well not to profess any belief in the Absolute. His position is thus much more reasonable than that of Mansel, who defined the Absolute in a similar, although somewhat less objectionable manner, proved that, understood in that sense, it could not be true, and

yet held that the Absolute was to be believed in in some entirely unintelligible sense. Had Dr. Martineau, however, not elected to mean by the Absolute an absurdity, he would not have separated, as he has done, the Absolute from the Noümenal, but would have seen that they must stand or fall together.

Book ii.—"Theism"—forms more than half of the work. It comprises 280 pages of the first and 140 pages of the second volume. As regards far the larger portion of it, the reviewer is so entirely at one with the author that he has no objection or criticism to offer. This is especially so in the case of the sections relative to Teleology. Few who regard the universe as a teleological system at all will fail to admire the manner in which Dr. Martineau has expounded and vindicated their faith. Excellent as his whole discussion of this subject is, those parts of it which treat of the moral difficulties in the way of acceptance of the theistic inference from the teleological conception of the world, the difficulties involved in seeming waste, in suffering and in sin will, probably, be generally felt to be pre-eminently impressive and valuable, from the rare depth and truth of spiritual insight, the wealth and weight of moral wisdom, by which they are characterised. It may safely be said that among British authors, with the exception, perhaps, of Cardinal Newman, no one could have written so worthily on these the chief obstacles to theistic belief.

To the metaphysician the most interesting part of the second book will be the first five sections. Of these the first is the fundamental one, seeing that it deals with the idea or meaning of causality—the primary principle, according to Dr. Martineau, of Theism. It is argued therein that, "except as the seat of change, or partner in a change, no 'thing' can ever play the part of cause"; that "prior phenomenon" does not answer to the significance of cause; that the dynamic idea clings to causality throughout, yet does not complete it; and that cause is ultimately identical with determining Will. Old in substance as the reasoning in support of these positions necessarily is, the freshness of the form in which it is invested makes it look almost original. And, in fact, a considerable amount of new and individual thinking is embodied in it. The acute yet appreciative examination of Prof. Laurie's account of the evolution of the causal idea may be referred to in proof, and is in itself especially noteworthy. At the same time, it by no means commends itself to the reviewer as a conclusive, or even on the whole successful, refutation of the theory examined. Without committing himself to any unqualified acceptance of the doctrine of percipience set forth by Prof. Laurie, he cannot doubt that it is entirely true in exhibiting percipience as a complex process, and not as the single unanalysable act of seizure of the object which Dr. Martineau imagines it to be. Psychological scrutiny seems clearly to reveal that percipience is much more like "a secret pocketful of logical

small change" than like "a comparatively empty purse, with all its wealth in a single coin". That in the consciousness of percipience there is a realisation of causation in as perfect a form as is disclosed anywhere else in experience must, we think, be admitted, although causality may make its presence also distinctly felt elsewhere. That the idea of causation can only find its complete satisfaction in voluntary exertion, in intelligent self-determination, appears to be a very reasonable thesis, while that causation is to be identified therewith seems to be a very questionable one. That the idea of cause is only derived from the consciousness of will pure and simple is an hypothesis to which there are various objections, and especially one which may well relieve us from the necessity of producing any other, namely, that pure and simple will is unreal, unknown, an abstract illusion of metaphysicians, not a fact of consciousness. In order to find cause in will alone we must first find will alone, and this is precisely what we never find or can find. Will is not experienced, and cannot be conceived of, in and by itself. It exists and is known only in and through other properties of mind, other constituents of consciousness, from which it is inseparable. It has no being by itself, but subsists only in the organic unity of mental life, and, therefore, only in indissoluble conjunction with feeling and thought. If there were any such thing as will pure and simple it would be will in which there was no self-determination or choice, no view to an end or purpose; it would be kinetic and nothing more, the lowest instead of the highest species of causation, and necessarily inadequate to raise us to the apprehension of a Divine Causal Reason. Whether conclusive or inconclusive, however, Dr. Martineau's criticism of Prof. Laurie's theory of 'cause as a dialectic percept' is vigorous and interesting, and may, it is to be hoped, lead the propounder of the theory to give a somewhat fuller exposition of it than is to be found in *Metaphysica Nova et Vetusta*.

The second section is a searching examination of the attempt recently made by Prof. Royce to dispense with the principle of causality in the theistic argument, to eliminate will from the idea of God, and to represent the Divine solely as 'an all-inclusive thought'. But on this section, as well as on the others relative to Will, and on those on Right, the second of the two great supports of theistic belief, as set forth by Dr. Martineau, our limits will not allow us to offer any remarks.

Book iii. is headed "Review of Opposing Systems". Why? The only "opposing system" of which it treats is "Pantheism". The rest of the book—the second chapter—is a general discussion of "Determinism and Free Will".

Theism, understanding thereby Monotheism, and Pantheism are terms often so applied as to be not opposed, or even distinguishable. The word Pantheism, in particular, is wonderfully protean, so that the systems called pantheistic are seldom purely

pantheistic, and are often more monotheistic than pantheistic. It is far from easy to draw true distinctions between Pantheism and Theism; far from easy to state precisely wherein they ought to be held opposed. According to Dr. Martineau, the fundamental opposition, "the exact theoretical distinction," between the two systems, "lies between *All-immanency* and *Some-transcendency*". The theist admits immanency, or the presence and operation of God in the laws and events of nature, yet maintains God to be "*somewhere more than the contents of nature*, and to *overpass them* in His being, action and perfection". "The pantheist, on the other hand, makes no return for the concession to his favourite conception of 'immanency'; he can allow no 'transcendency'; the life with which he charges the universe has no actual or possible existence but in the aggregate of finite things; it speaks its whole being in the cosmic laws." Is this, then, a valid distinction? No. Immanency and transcendency denote a distinction which has only reference to the finite. The Infinite cannot transcend itself. God as infinite cannot transcend His own immensity and eternity, His own being and perfection. It is only the finite which can be transcended, and whatever does not transcend the finite, or is *all-immanent*, must be itself finite. Hence affirmation of the distinction drawn by Dr. Martineau virtually amounts to representing Theism as the doctrine which defends the infinity of God, and Pantheism as the doctrine which contends for His finiteness. But this representation is entirely untenable, whether considered from the theoretical or the historical point of view. It is not more a characteristic of Pantheism than of Theism to teach that God does not transcend the finite; is *all-immanent;* "has no actual or possible existence but in the aggregate of finite things". Dissent from Dr. Martineau on this point, however, need not prevent our admiring the general excellence of his discussion of Pantheism, and the striking beauty of many of the pages comprised in it.

The chapter on "Determinism and Free Will" is one which cannot be submitted to review in this merely general notice, but which may well afford matter for separate consideration in future numbers of MIND. As it is written from the libertarian standpoint, objection to it may be expected to be forthcoming both from necessitarians and criticists. In some of its pages Dr. Bain, Mr. Shadworth Hodgson and Prof. H. Sidgwick are primarily and especially interested.

Book iv. is on "The Life to Come". It treats of death in its physiological, metaphysical and moral aspects, setting forth under the last heading, as "vaticinations of intellect," "vaticinations of conscience" and "vaticinations in suspense," the rational grounds of belief in immortality with great beauty and force. As the rational grounds of the belief have certainly not been, in most lands and ages, the chief causes of its prevalence, we could, of course, desire to have had the latter considered as well

as the former, and to have had the relationship of the causes and the reasons in some measure exhibited. Our desires, however, are apt to be very exorbitant, and perhaps Dr. Martineau has done wisely not to undertake the two investigations. This may very probably be a case where the apophthegm of Pittacus—*τὸ ἥμισυ τοῦ παντὸς πλεῖον*—is applicable.

Dr. Martineau is to be cordially congratulated on having produced a work of such rare merit on the most interesting of all subjects.

R. FLINT.

Spinoza. By JOHN CAIRD, LL.D., Principal of the University of Glasgow. ("Philosophical Classics.") Edinburgh and London: W. Blackwood & Sons, 1888. Pp. 315.

It has already been noticed (MIND No. 50) that the scope of Dr. Caird's book differs from that of the other volumes of the series of "Philosophical Classics". The limits assigned him have led to the author's omission of his account of Spinoza's life and letters, "besides other parts of his plan to which special reference need not here be made". It is impossible not to feel regret at this omission. In addition to the events of his life (for a record of which we are referred to Mr. Pollock and Dr. Martineau), there are many other questions about Spinoza—such especially as his attitude to the religious problems of the day and his contributions to Biblical criticism—on which Dr. Caird's views would be read with the greatest interest. Perhaps these may still see the light in some other way.

But Dr. Caird's plan differs from that of the other volumes of the series in something more than the omission of all account of the philosopher's life and minor writings. The book is not so much an introduction to Spinoza as a critical estimate of his philosophy, and will probably be found to be of greatest value by those who are already in some degree familiar with their author. Beside what has been already done—especially by Mr. Pollock and Dr. Martineau—in making Spinoza known and elucidating his doctrines, Dr. Caird's contribution has a place of its own. It fixes attention on Spinoza's central doctrine, traces its origin and estimates its value, and, with this always in view, gives an exposition of his philosophy in which no essential feature is left out of account and the difficulties and inconsistencies of the theory are traced to their source.

It should be said that the point of view is made clear throughout, and is frankly Hegelian; reference being frequently made to "later philosophy" for the solution of the problems, expressed and implicit, of Spinoza's thought. That these solutions are really adequate and satisfactory is indeed not made out by Dr. Caird; perhaps not meant to be made out. But he is successful in indicating the appropriateness of his point of view.

The negative nature of the finite, and the question—in Spinoza little more than a puzzle—of its relation to the absolutely infinite being, call for an explanation of negation or of not-being such as Hegel offered and as is quite absent in Spinoza. This point of view is enforced, especially against the attempt to put a naturalistic interpretation upon Spinoza's thought. We may, indeed, so "define 'Nature' as that it shall include both finite and infinite, the multiplicity of individual things, and the principle which gives them unity. If we mean by the universe all reality, then to say that there is nothing outside of it, that nature or the universe is all, is only an identical proposition." But if 'Nature' be taken to mean, as it commonly does mean, the sum of individual things, or collection of finite existences, it is evident that, in this sense, it does not correspond with Spinoza's view of the universe, or exhaust the constituents of knowledge. His opposition to the Scholastic doctrine of 'universals' is only one side of his theory. "For him the individuals of ordinary observation are as much unrealities, figments of the imagination, as the abstract essences of the schoolmen." Their isolation is dissipated in the intellectual apprehension of their essential nature, which involves the idea of the most perfect being. The motive of Spinoza's philosophy is not to be found in natural science, but "in his moral and spiritual aspirations," and in his endeavour "to rise above the illusoriness and unreality of the finite".

Dr. Caird's introductory chapters on Spinoza's predecessors—the mediæval Jewish philosophers, Bruno and Descartes—are in keeping with the plan of his work. They do not add much to the still vexed question of the development of Spinoza's thought in his own mind. But they bring out with clearness and precision the contrast between his leading doctrines and those of his predecessors, especially the writers of the Kabbala, and Maimonides.[1]

The key to Dr. Caird's interpretation of the *Ethics* is given in his discussion of Spinoza's relation to Bruno (p. 89):—

> "We shall find that Spinozism is, from one point of view, the ambiguous result of two conflicting elements—a self-identical, undetermined substance which is all in one, and a world of finite individualities, each of which has a being and reality of its own. It is the obvious intention of the author to bring these two elements into the unity of a perfect system—to find in Substance the origin and explanation of finite existences, and also to bring back all the individualities of the finite world into unity in their relation to the one infinite substance. But the

[1] With reference to the latter, a slip of the pen on p. 66 may be noticed. It is there said that "if any positive reference to him can be traced in Spinoza's writings, it is in the passage . . . in which he speaks in a somewhat slighting tone of some faint anticipation of his doctrine of the relation of the attributes of thought and extension to the divine substance". Dr. Caird is thinking, of course, of Spinoza's *philosophical* writings. Maimonides is frequently quoted by name and criticised in the *Tractatus theologico-politicus;* comp. cc. v., vii., xv.

relation between the two elements is only asserted, never demonstrated. The absolutely undetermined is, by its very definition, precluded from going forth out of itself into a world of finite determinations; and if we start from the latter, they can only be brought back to the former by the destruction of their finitude, and their absorption in the infinite all."

The position thus taken up at the outset gives to the whole exposition the character of a criticism. Nor, as it seems to me, can Spinoza's view, even on the most fundamental points, be made clear except critically. Two different conceptions of the nature of infinite or ultimate being are struggling in him for expression; and the exigencies of his thinking make him oscillate between them. As Dr. Caird puts it, he passes constantly "from the notion of substance as the negation to that of substance as the affirmation of all possible determinations". It is this double-sidedness of his doctrine that has led to the divergent interpretations of his philosophy—especially of his theory of the attributes; and one of the chief merits of Dr. Caird's volume is the clearness with which he recognises both lines of Spinoza's thought, and the thoroughness with which he follows out those lines and traces his author's transition from one to the other,—a transition of which, as he says, "it is easier to discern the motive than to understand the logic". The ambiguity is most striking in the doctrine of the attributes, in which the one substance appears under a multiplicity of aspects. On the one side this diversity is regarded by Spinoza as purely subjective, relative to the finite intelligence. But this view does not fully represent Spinoza's thought. The incompleteness of the interpretation becomes obvious at once when we remember that the finite intelligence is itself a mode of the attribute of thought. If we insist upon treating the whole of Spinoza as an expansion of the text *Omnis determinatio est negatio*, we shall have to follow Erdmann in reversing Spinoza's own method of treatment, and making the attributes depend on the modes. But the very same difficulty attaches to the explanation of modes. From the one point of view, they are mere fictions, illusory "creations of the abstracting imagination". But fictions need explanation as much as realities; and from the other point of view the finite is recognised by Spinoza as only partly negative, as also involving "the idea of the eternal and infinite essence of God". This element—the essence as distinguished from the existence of the individual thing—lifts it out of the limbo of mere negation; and it is this positive element which plays so important a part in Spinoza's psychology and ethics as the "self-maintaining impulse" by which every individual thing tends to persist in its state of being. We are equally far from the mere identification of definiteness with negation in the doctrine of infinite modes by which Spinoza seeks to bridge the gulf between the infinite and finite, not only "by introducing the element of self-determination into the idea of the infinite, but also, from an opposite direction, by elevating the finite world into a *quasi*-infinitude".

The view of Spinoza's central doctrines thus maintained throughout makes way for a valuable criticism of his moral and religious theories. The way in which Dr. Caird traces how the parallelism of thought and extension is lost in the richer content of the attributes of thought, how the apparently egoistic theory of practice is transcended when the self-maintaining impulse is seen to seek the realisation of a self "whose essence is reason and the knowledge and love of God," and how Spinoza passes from his view of the illusoriness of the individual to a conception of the individual mind as becoming free from the bondage of the passions and attaining immortality with the disappearance of the illusion of time—all this may not be absolutely new, but it obtains a new value as it harmonises with and completes the design of the author's critique of Spinozism.

W. R. Sorley.

L'Idéalisme en Angleterre au XVIII^e^ Siècle. Par Georges Lyon, Ancien élève de l'Ecole normale supérieure, Professeur agrégé de philosophie au Lycée Henri IV., Docteur ès lettres. Paris: F. Alcan, 1888. Pp. 481.

The present contribution to the History of Philosophy—a branch of study which is now being cultivated with great success in France—not only has a special interest for English readers, but is in itself an excellent piece of work. Its purpose is to trace from the beginning the movement of English thought which in the 18th century culminated in the idealistic theory of the external world; the systems of individual thinkers being expounded only so far as they are phases of this movement Accordingly, the author neither confines himself to English names nor to the greater names among Englishmen. For the origin of the idealistic movement in England, although there are prolegomena of "subjectivism" in Hobbes (pp. 51-6), has to be traced back to Descartes. Malebranche, again, had more influence in England than in France, and by him Cartesianism had already been developed in the idealistic direction. The first chapter, therefore, is devoted to Descartes, and one of considerable length (c. iv.) to Malebranche. The idealistic theory, when it had been definitely put forth by Berkeley, first gained disciples in America; so that American names also have to be considered. And, of course, not the least important part of any continuous history of a philosophical movement must consist of expositions of the theories of minor thinkers. The author's study of these has been so thorough that he gives a chapter to Richard Burthogge, and one to the American Samuel Johnson—names, it may be safely said, which are known to few English philosophical students. Adequate accounts are, of course, given of Norris and Collier. Taylor has a place in chapter v. as a representative "proselyte of Malebranche". The last chapter (c. xi.) is devoted to Hume, and has for its purpose to show how

Berkeleyan idealism was continued by the "phenomenalism" of the great sceptic.

M. Lyon brings out very clearly the nature of the influence of Descartes in England. Descartes' true philosophical successors in the 18th century, he contends, were Englishmen. In France, it was not the 18th but the 17th century that really deserved the name of "the philosophical century," so far at least as the metaphysical and speculative part of philosophy is concerned. What was required in order that the idealism latent in Cartesianism should emerge was independent thinking from the Cartesian starting-point; and in England, where Descartes had from the first enthusiastic admirers but no strict disciples, the requisite degree of independence was found.

The relation for which M. Lyon contends between Descartes and the English philosophical movement that started with Locke may be taken as established. The author, however, underrates the importance of Locke in the movement. Locke, as he sees, misapprehended Descartes' doctrine of innate ideas (p. 57); and, as he acutely points out in discussing a criticism of Green (with whose Introductions to Hume he is well acquainted), the unsatisfactoriness of Locke's utterances as regards the external world is due to confusion of thought on the philosophical question, and not at all, as Green says, to the external world being "the crux of empiricism" (p. 63). Thus he is led to seek the origin of the clear philosophical theories of Berkeley and Hume elsewhere than in Locke. Berkeley, as well as Collier, he tries to derive from Malebranche, though he points out that Berkeley repudiated, while Collier acknowledged, the relationship (p. 250). Again, he seeks to attach Hume not only to Berkeley, but directly to the Cartesian tradition (p. 452). How near Malebranche came to idealism he shows in chapter iv., where he also dwells much on the interest of Malebranche's psychology, pointing to his affinities with Hume and Hartley (p. 115), and in particular to his anticipation of contemporary "psycho-physiology" (p. 127). He finds it surprising that an English disciple like Norris, who, as a Protestant, was not watched by the same suspicious orthodoxy, should have hesitated to draw the idealistic conclusion which Malebranche could only avoid by an appeal to Revelation (p. 223). Berkeleyanism, however, as M. Lyon himself constantly insists, is at the antipodes of Cartesianism in this respect, that it is "an *a posteriori* metaphysics". The *a posteriori* character of Berkeley's thought, he remarks more than once, is not sufficiently recognised by Prof. Fraser; and he finds that even in the *Siris* there is no fundamental departure from Berkeley's first manner of thinking. Malebranche's doctrine, on the other hand, he describes as "a Cartesian Platonism"; and throughout the history of idealism he finds the antithesis of the Platonising and the experiential tendency; Malebranche and Hegel, in his view, representing the former, Berkeley and Mill the latter. Now is

not the experiential character of Berkeley's philosophising as distinguished from that of Collier an evidence of his direct dependence on Locke, whose aim it was to oppose the *a priori* metaphysics of Descartes? Though Locke may have done nothing himself to educe the idealistic theory from the Cartesian "presuppositions," this does not detract from the importance of his experientialism as a basis for the typical form of English idealism.

An interesting episode of the book is the account of the fortunes of Immaterialism in America (cc. ix.-x.). Full expositions are given of the philosophical system of Dr. Samuel Johnson, "the first President of King's College in New York," and Berkeley's first and most faithful disciple (c. ix.), and of the immaterialism of Jonathan Edwards as it is found set forth in his posthumous work on the mind (c. x.). The *petitio principii* of "common-sense philosophy," however, was soon to triumph in New England, whose University authorities naturally did not fail to become inspired with fear of the "dangerous" consequences of idealism. The discouragement of the Berkeleyan theory by the authorities met with no resistance, and American immaterialism came to an abrupt close (pp. 440-3).

A critic who agrees with M. Lyon in regarding the idealistic theory of the external world as definitively established by philosophy will find little to controvert in his positive conclusions. The distinction he draws between the two schools of idealism—the experiential and the Platonising school, is a sound distinction, and one that may easily be verified in contemporary English philosophy. With what he says as to the two forms of idealism not being so incompatible as might at first appear it is also possible to agree, though it may be doubted whether the reconciliation of them is likely to come, as M. Lyon suggests (p. 479), from "a Hegelian". The reconciliation that a Hegelian would be likely to attempt is one between "Transcendental Idealism" and the Realism of Common-sense.

M. Lyon's book ought to find many readers in England. His work has the merits both of fulness of matter and attractive presentation. His accounts of minor thinkers are especially to be commended, as enabling the reader to form an independent judgment upon their various degrees of interest and originality. He has well understood the characteristics of the English philosophical spirit, though a failure of perfect apprehension may be detected here and there. When it is said, for example (p. 464, n. 2), that Hume, like Mill and all other English thinkers, claimed the right to speculate as boldly as he pleased without in any way menacing received opinions, this gives a somewhat false impression. It would be a better description of the attitude of Descartes than of Hume or Mill. The exact attitude of Hume, however, as M. Lyon very well shows (pp. 464-6), is difficult to define. Even native critics are not at one in their definitions of it.

THOMAS WHITTAKER.

VII.—NEW BOOKS.

[*These Notes (by various hands) do not exclude Critical Notices later on.*]

On the History of the Process by which the Aristotelian Writings arrived at their Present Form. An Essay by Richard Shute, late Student and Tutor of Christ Church. With a brief Memoir of the Author. Oxford: Clarendon Press, 1888. Pp. xv., 183.

In Mind ii. 392, Shute's early work, *A Discourse on Truth*, received the attention due to its great freshness, at least, of style; and when, after a few years of remarkable influence as an Oxford teacher, he sank prematurely into the grave, Mr. J. A. Stewart, in xii. 157, gave expression to the sense left with his sorrowing friends of what he had been, even more than of what he had done or was on the way to do. For himself, as is told in the excellent little memoir (by "F. Y. P.") prefixed to the present volume, he could meet his fate with the dying words (to a friend) now inscribed by his wife on his tomb: "I think that man is happiest who is taken while his hand is still warm on the plough, who has not lived long enough to feel his strength failing him or his work every day worse done". The volume gives an essay he wrote for the Conington Prize Competition in 1882. He was never able to re-write it in the light of his later studies in Aristotle, and it is now published on the responsibility of the friends who were left to dispose of his papers. It is an attempt in a field that has been well worked over in Germany, but Shute displays so much independence of judgment in relation to his foreign predecessors that his friends' decision to lay the results of his survey before English readers is much to be approved. What conclusions he was led to can best be given in words selected from his own summary at p. 176: (1) "Of the great bulk of the Aristotelian works as we now have them, there was no kind of publication during the lifetime of the master, nor probably for a considerable period after his death". (2) "We cannot assert with certainty that we have ever got throughout a treatise in the exact words of Aristotle, though we may be pretty clear that we have a fair representation of his thought; the unity of style observable may belong quite as well to the school as to the individual." (3) "The works which are preserved to us come chiefly, if not entirely, from the tradition of Andronicus, and stand in no very definite relation to the list of Diogenes, and consequently we have a very considerable proportion, not a merely insignificant fraction, of the reputed works of Aristotle known to Latin antiquity." (4) "The majority of the titles and probably all the definite references are post-Aristotelian, and therefore no safe argument can be drawn from the latter as to the authenticity or original order of the Aristotelian works, though other very valuable inferences as to the subsequent history of these works result from their careful consideration." (5) As to "another class of works which bear Aristotle's name—of which we can say with certainty that the portions which we have of them are precisely as the final author wrote them but cannot with equal certainty assert that that author was Aristotle—we can safely assume that these works, and works like these, were those best known to our earliest authorities on the subject, Cicero and his predecessors, and that on them all the praise of Aristotle's style is founded". "Criticism of Aristotle," it is finally declared, should "always be of thought rather than of phrase, of sentence rather than of word".

English Composition and Rhetoric. Enlarged Edition. Part Second. "Emotional Qualities of Style." By Alexander Bain, LL.D., Emeritus Professor of Logic in the University of Aberdeen. London: Longmans, Green & Co., 1888. Pp. xxxii., 325.

This volume, coming after the other on "Intellectual Elements of Style" issued last year (see Mind xii. 298), completes the transformation and development of the author's well-known *Rhetoric* of 1866. Part ii. is essentially, or rather in nearly every respect, a new book. Only in some minor matters is anything to be found common to the new and the old exposition. The former ten-page account of "Strength" disappears in a six-fold longer tracking of the quality through all its kinds and manifestations. "Feeling," taken for purposes of Rhetoric as equivalent to Tenderness or the amiable side of human nature, is in like manner analysed and illustrated through more than 100 pp., where half-a-dozen were given before; and the novel expansion given to the topics "Vituperation" and "The Ludicrous" is only less. There is now also supplied at the beginning a classification of Art-emotions, followed by an elaborate consideration (pp. 11-54) of the rhetorical "Aids to Emotional Qualities". The volume, as it now stands, is of no small interest to the psychologist as a practical—or rather (borrowing a word from German usage) 'pragmatic'—supplement to that theory of the Emotions which has long been one of the author's chief titles to fame. Even in point of theory the careful reader will here meet with new lights; while he cannot but be drawn on by the author's characteristic determination to find the analytic expression of everything that can be analysed in literary effect. Nor is the result the less instructive and useful for guidance, however it may be contended that the best literary work, at least of the creative sort, has always something in it of which analysis can never hope to find the formula.

Francis Bacon: His Life and Philosophy. By John Nichol, M.A., LL.D., Professor of English Literature in the University of Glasgow. Part i. Bacon's Life. ("Philosophical Classics for English Readers.") Edinburgh and London: W. Blackwood & Sons, 1888. Pp. x., 212.

This is the thirteenth volume issued of the "Philosophical Classics" series. Like its immediate predecessor, Principal Caird's *Spinoza* (reviewed above, in the present No.), it departs, but departs in a different way, from the rule of the series. Of Spinoza no life was given, and even his philosophy was examined rather than expounded. The present volume is all Life, and we have to wait for another to get Prof. Nichol's account of Bacon as a philosopher. It is difficult to say which form of departure from the rule of the series is least to be approved. There was certainly no more occasion for the licence in the case of Spinoza or Bacon than in the case of some half-dozen of the other great thinkers already treated in the series. A great deal can, of course, be said on the debatable events of Bacon's life, and on his personal character, and it is said by Prof. Nichol with plenty of literary effect; but even if, in the sum of it all, much could be called new, one does not see how thereby the understanding of his philosophy is helped forward. For this series, therefore, there was no great need to enlarge on Bacon's life, and Prof. Nichol might have done very well with a single volume. If the series is continued beyond Bacon, as sometimes has been promised in a general way and certainly is much to be desired, let us hope that the editor will enforce again the rule of the one volume fairly balanced, according to the circumstances of each case, between Life and Philosophy. Meanwhile, as regards Bacon and Prof. Nichol, we can but wait, in Mind, for the coming Part ii.

Scientific Religion or Higher Possibilities of Life and Practice through the Operation of Natural Forces. By LAURENCE OLIPHANT. With an Appendix by a Clergyman of the Church of England. Edinburgh and London: W. Blackwood & Sons, 1888. Pp. xiii., 473.

It is no more possible with this book than with its predecessor *Sympneumata* (see MIND x. 301) to attempt even the most general analysis of contents. That, we are told, was written down by Mr. Oliphant from the dictation of his late wife, he being mere passive instrument in the case; this has come forth from himself, but still in a manner of which he can give no further account than that it has been written under an irresistible impulse, that would take effect only in the particular room of his Syrian home whence the spirit of his wife had passed into the unseen. In the first half of the book, the religion of which he has thus become the channel of revelation to the world has its "scientific" character set forth and vindicated, in relation with certain results of recent inquiry and in contrast to the baseless dogmatism of prevailing religious systems. The second half consists in great part of an exegesis of Scripture (carried out with minuter detail by another hand in the appendix), showing the hidden truth enshrined there which has all the time been missed or perverted by the Christian Churches of every name. The "higher possibilities of life and practice" now in view depend upon the victory to be gained by the "Divine Feminine" over the "infernal feminine," which has hitherto held sway in our world since the Fall and had already before caused nothing less than a world-catastrophe. In other words, the true position of woman as the proper complement of man (each particular woman, in the seen or unseen, the complement of some particular man), is in process of becoming finally asserted; and hereby the salvation of the world will be wrought. There is a curious affinity—apparently quite unknown to Mr. Oliphant—between his own views and those adumbrated by Comte at the end of the *Politique Positive;* though their methods of deduction or other argumentative support are as widely different as could be.

Proceedings of the Society of Psychical Research. Part xii. London: Trübner & Co., 1888. Pp. 270.

The longest of four main papers in this latest Part of these *Proceedings* is a very elaborate (150 pp.) "Relation de diverses expériences sur la transmission mentale, la lucidité et autres phénomènes non explicables par les données scientifiques actuelles," by M. Charles Richet, Professor of Physiology in the Paris Faculty of Medicine, and editor of the *Revue Scientifique.* It gives, with the help of many figured illustrations, the results of an experimental inquiry carried on for six years, pointing in the author's opinion to, though (he must add) not yet demonstrating with certainty, "the existence in certain persons at certain moments of a faculty of [objective] knowledge which has no relation with our normal faculties". He would call this faculty "Lucidity" (without implying that it has a relation to retinal vision more than to any other sense), and thinks that all the phenomena of so-called thought-transference, &c., may be brought under it. New "Experiments in Thought-transference," by A. Schmoll and J. E. Mabire, occupy 46 pp. of the Part. The other chief papers are from the hand, now for ever still, that has always been most active in the work of the Society since it began to be. One is but a reprint, slightly modified and now entitled "Hypnotism and Telepathy," of the two articles contributed by Gurney to MIND xii. 212, 397, under the name "Further Problems of Hypnotism".

The other (pp. 3-17) records what appears to have been his latest series of "Experiments in Hypnotism," yielding further striking results as to an "intelligent automatism" active in the post-hypnotic state, which the previous series had first disclosed, and as to production of anæsthesia by proximity of the operator's hand, which had been observed a good deal earlier.

Evolution and its Relation to Religious Thought. By JOSEPH LE CONTE, Professor of Geology and Natural History in the University of California. London: Chapman & Hall, 1888. Pp. xviii., 344.

In the first two parts of this book (i. "What is Evolution?" ii. "Evidences of the Truth of Evolution") the author gives an exposition of the doctrine of evolution generally, with more special reference to biological evolution. In part iii. ("The Relation of Evolution to Religious Thought," pp. 257-338) he seeks to show the consistency of the evolution-theory in its widest sense with "fundamental religious beliefs". The first two parts are not only a good exposition of the theory as now held, including its latest developments, but have some distinctive points that claim the attention of biologists. In a chapter on "The Relation of Louis Agassiz to the Theory of Evolution" (pt. i., ch. ii., pp. 32-49), the author contends that "without Agassiz (or his equivalent), there would have been no Darwin"; that the great American naturalist "laid the whole foundation of evolution, solid and broad," though he "refused to build any scientific structure on it". Without the establishment of certain "laws of geologic succession"—formulated by the author as (*a*) the law of differentiation, (*b*) the law of progress of the whole, (*c*) the law of cyclical movement—no inductive proof of the Darwinian theory would have been possible, and for the knowledge of these laws "we are mainly indebted to Agassiz". These laws are, of course, no longer to be understood as merely formal laws, but as laws of the actual process of evolution. One of the distinctive points of the author's view is "that *the steps of evolution are not always uniform*" (p. 239). "Causes or forces are constant, but phenomena everywhere and in every department of Nature are *paroxysmal*." That the transitions between species are in a manner catastrophic, being brought on by rapidly changing conditions, and thus extend over much shorter periods of time than the persistence of species in fixed forms adapted to uniform conditions, serves in part to explain the rarity of transitional forms in the geological record. What seems to be the comparative fixity of forms in recent times is explained by the tendency of specialisation to arrest successively the advance along particular lines. "Thus, throughout the whole geological history of the earth, the larger number of forms, by specialisation, become rigid and perish, while the fewer, more generalised and more plastic forms take up the march and carry it forward a step, only to be themselves specialised and fixed. . . . Now, obviously, this specialisation and respecialisation can not go on for ever." The advent of man is "in many ways a sign of the completeness of organic evolution". With man, evolution has been transferred "from the organic to the social plane, from the material to the psychical," and it seems as if, "when the cycle of human evolution culminates," "organic forms will no longer be modified by natural but wholly by artificial selection" (pp. 250-1). The doctrine of evolution is brought into harmony with the requirements of religious thought by the view that "the phenomena of Nature are naught else than objectified modes of divine thought, the forces of Nature naught else than different forms of one omnipresent divine

energy or will, the laws of Nature naught else than the regular modes of operation of that divine will, invariable because He is unchangeable" (p. 283). In accordance with his biological theory of "paroxysmal" transitions from one form of life to another, the author holds that "there is a sort of taxonomic scale of force and matter. There are—(1) the plane of elements; (2) the plane of chemical compounds; (3) the plane of vegetal life; (4) the plane of animal life; and (5) the plane of rational and, as we hope, immortal life" (p. 296). "Although energy by transmutation may take all these different forms, and thus does now circulate up and down through all these planes, yet the passage from one plane upward to another is not a gradual passage by sliding scale, but *at one bound*. When the necessary conditions are present, a new and higher form of force at once appears, *like a birth* into a higher sphere." The upward movement of energy is one of increasing "individuation". "According to this view, the vital principle of plants and the anima of animals are but different stages of the development of spirit in the womb of Nature: *in man at last it came to birth*" (p. 300). Nature is all mechanics from the outside, all mind from the inside. "For science it is all mechanics, for theology it is all mind. It is the duty of philosophy to reconcile these two opposite views" (p. 317). "This reconciliation, as far as it is possible for us, is found in a personal will immanent in Nature, and determining directly all its phenomena" (p. 321). "Immanence without pantheism, and personality without anthropomorphism," is the phrase in which the author sums up this view.

The Philosophy of Religion on the Basis of its History. By Dr. Otto Pfleiderer, Professor in the University of Berlin. Vol. iii., translated by Allan Menzies, B.D. London: Williams & Norgate, 1888. Pp. viii., 356.

Referring to Mind x. 285 for Critical Notice of the German original and to xi. 587, xii. 616, for mention of former parts of the English translation, we now note the appearance of the present volume giving the first half of the second main division of the work—"Genetic-speculative Philosophy of Religion". The other half of the division, completing the work, is already in the press and will appear shortly. The translator has, with the author's permission, added a few notes on some works bearing on mythology and early religions which have appeared since the date of the last German edition.

Memory, its Logical Relations and Cultivation. By F. W. Edridge-Green, M.B., B.S. (Durham); Member of the Royal College of Surgeons (Eng.); Licentiate of the Royal College of Physicians (Lond.). London: Baillière, Tindall & Cox, 1888. Pp. iv., 274.

The author's doctrine of memory forms part of a physiological and psychological doctrine that has much in common with phrenology, although the special assumptions of phrenologists are rejected (pp. 35-9). "The mind," in his view, "is made up of a number of faculties, each of which responds to certain impressions, and influences the mind as a whole to seek after those impressions and to avoid their negatives" (p. 48). The brain is "a multiple organ," and each of its parts is the seat of a mental faculty. A classification of "the faculties of the mind," chiefly drawn from phrenology, is given on pp. 66-7. Memory, according to the theory developed, is "a definite faculty, and has its seat in the basal ganglion of the brain, separate from, but associated

with, all the other faculties of the mind" (p. 3). The optic thalami and the corpora striata are "the seats of sensory and motor memory respectively" (p. 205). Arguing from cases where there has been "loss of memory of impressions received within a certain period of time" unaccompanied by "loss of function of any of the faculties," the author concludes that "the theory that the memory occupies the same portion of brain as the perception is not tenable" (pp. 47-48). Part i. (pp. 1-217) contains the theory and many illustrative anecdotes. Part ii. (pp. 218-271) gives rules for the cultivation of the memory, "sensory" and "motor".

Leibniz's New Essays concerning the Human Understanding. A Critical Exposition by JOHN DEWEY, Ph.D., Assistant Professor of Philosophy in the University of Michigan, Professor (Elect) of Mental and Moral Philosophy in the University of Minnesota. ("Griggs's Philosophical Classics," No. 7.) Chicago: S. C. Griggs & Co., 1888. Pp. xvii., 272.

No piece of work was more wanted or was better worth doing for this useful series (as to the aims and compass of which see MIND No. 51, p. 432) than that which Prof. Dewey has here executed; and, considering his subject, he has shown nothing but good judgment in treating it with a freedom of method, in respect of sidelong view, not adopted by writers of the previous volumes. It is hardly possible, or would be useless if possible, to give a simply "critical exposition" of the *Nouveaux Essais* by the side of the other "masterpieces of German thought" which the series covers; yet there is no other which it more, or in a way even so much, should interest the English student to understand. In explaining the famous controversial treatise, Prof. Dewey has to keep his eye at once on Locke, against whom it is directed, and on the manifold occasional (none of them systematic) expositions of Leibniz's characteristic ideas, which are all through implied but seldom expressly declared in the *Nouveaux Essais.* The result is that he manages to make of the volume a very welcome guide to the comprehension of Leibniz generally —welcome because affording a most useful supplement, as regards the main conceptions of his philosophy, to the account (excellent as that in many respects was) given by Dr. Theodore Merz in the volume contributed some years ago (see MIND ix. 316) to "Blackwood's Philosophical Classics". We may return to Prof. Dewey's exposition in fulfilling— it is hoped before long—a half-promise made in No. 50, p. 312, to give some detailed account of the important new material for the understanding of Leibniz's relations to Locke lately brought forward by C. J. Gerhardt. Of this material Prof. Dewey does not seem to have had the opportunity of making use.

The Aryan Race, its Origin and its Achievements. By CHARLES MORRIS. Chicago: S. C. Griggs & Co., 1888. Pp. vi., 347.

The author has very well succeeded in his purpose of giving a brief outline of the history of the Aryan race as ascertained by philologists and anthropologists. The narrative is characterised by directness of movement and grasp of the subject as a whole. His speculations about the primitive home of the Aryans and about the origin of the Aryan race have some originality. There are interesting remarks (see, for example, p. 296) on the possible influence of climate and physical surroundings in the production of racial types. The short chapter (ch. ix., pp. 215-242) on "The Age of Philosophy" deals more with the preparation in mythology for philosophical speculation than with philosophy itself; but this is in accordance with the general plan of the book.

De la Classification des Sciences. Étude logique par ADRIEN NAVILLE, Professeur à l'Académie de Neuchatel. (Extrait de la *Critique philosophique.*) Genève-Bale: H. Georg, 1888. Pp. 46.

The author divides the sciences into three groups: "(1) The sciences of the real or sciences of beings. History. (2) The sciences of the necessary conditions of the possible or sciences of laws. Theorematic. (3) The sciences of the ideal or of the rules of activity. Regulative sciences." A scientific law, as established in the theorematic sciences, affirms that given such and such a term, another term necessarily follows. The effective sequence of a particular term is established when it is known by historical science that such and such a term was present in the beginning. Thus "historical laws," whether laws of physical development or of human history, are properly speaking not scientific laws but "general facts"; and their explanation depends on two factors—(1) laws of nature, (2) a certain collocation, among many possible ones, of determinate elements. By supposing a different original collocation of elements therefore, we can, without absurdity, "represent to ourselves in the past a history different from real history". As the real is a part (and only a part) of the possible, so also is the ideal. Being a different part, it is the object of a separate science. "The science of the ideal is the exposition of those rules of which the practice would assure the realisation of the best that is possible." If these rules could be adequately formulated, all persons would be obliged to accept them theoretically, though the practice of them would still be free. The problem of the particular "sciences of the ideal" is to determine the best ends, and, with the aid of the historical sciences and the sciences of laws, to select those ends that are realisable and to show how they can be realised. The "sciences of the ideal" or "regulative sciences" are divided into (1) "sciences regulative of invention," and (2) "sciences regulative of knowledge". The first group includes the "theory of good ends and of their hierarchy" (morals), and the "theory of means or theory of arts". The "arts" are divided into (*a*) those that aim at producing an immediate satisfaction (æsthetics, theory of play), (*b*) those that aim at the production of utility (theories of industry, medicine, eloquence, education, politics, &c.). Logic, "the science regulative of knowledge" or "of other sciences," is also included in the classification as a "science of the ideal," because "if (theoretical) science does not transform the object that it studies, it at least transforms the mind itself. Science, like art, has for aim and for result an amelioration of reality; the reality that is ameliorated is here the intelligence."

(*La Psychologie de l'Enfant.*) *L'Art et la Poésie chez l'Enfant.* Par BERNARD PEREZ. Paris: F. Alcan, 1888. Pp. vii., 308.

Some remarks in the second edition of M. Perez's *L'Education Morale dès le Berceau* (MIND xiii. 301) may have led his readers to hope that he would treat separately the subject of the æsthetic sense in children. This he has now done in the present volume, which, like his former works, is at the same time a study in the psychology of childhood and a practical treatise on education. The titles of its chapters are:—i. "Le goût de la parure"; ii. "Le sentiment de la nature"; iii. "Le sentiment de la nature (*suite*): la grâce et le sublime: les fleurs, les vallées, les montagnes, la mer"; iv. "L'art de plaire: politesse, babil, coquetterie"; v. "La musique"; vi. "Le dessin"; vii. "La tendance dramatique"; viii. "La lecture"; ix. "La composition littéraire". These titles by themselves give an idea of the varied psychological interest

characteristic of this as of the author's former studies of childhood. A few points of theoretical interest may first be selected for mention. M. Perez notices, as other observers have done, that children pay attention only to the salient features of landscape (pp. 78-9) and that they are not spontaneously "animists" (pp. 45-6). That which is absolutely constant in nature, he finds, does not at first become the object of their æsthetic emotions. Novelty is required to arouse æsthetic interest; and in the case of the heavenly bodies this interest is aroused by changes of position (p. 42). "Language and vocal music are in the beginning one and the same thing, the expression of less determinate feelings." It is only towards the age of four that the separation between the speaking and the singing voice is completely effected (pp. 148-9). In the reproduction of sounds, motor images and excitations play the chief part (p. 152). In the recognition of objects and in the first attempts at drawing, form and not colour is the essential thing (pp. 179, 205). A position on which M. Perez much insists is that "the most important factor of the æsthetic feeling is sympathy. . . . Human interest, that is the root and the crown of observation" (p. 59). The feelings aroused by external nature and, still more, by music, are not at first the strictly æsthetic feelings, but a vague emotional excitement. This, M. Perez thinks, has its dangers; and as a means of preventing over-excitation of the sensibilities, he suggests training of the intellectual element in the appreciation of art. To teach children music, instead of merely letting them hear it, for example, fulfils this purpose. M. Perez frequently returns to the question whether important intellectual differences between the sexes are observable in children, and is inclined to answer in the negative. His practical conclusion here is—"Give the two sexes the same education, an education of liberty, of good sense and of measure, and each of them will profit by it in its own manner" (p. 135). His tendency in detail, however, is towards more minute supervision than seems altogether consistent with this precept. The condemnation of dolls and fairy tales, remarked on by Mr. Pollock in his review of the first edition of *L'Education Morale dès le Berceau* (MIND vi. 281) does not reappear, but the suggestion that it is desirable to moralise Punch and Judy (p. 225) betrays the same tendency to over-regulation. Less attention is devoted to the beginnings of the literary sense in children than to the beginnings of the feeling for natural beauty and for music. In the chapter on reading we miss the varied psychological observations that give so much interest to the earlier part of the book; and it is here especially that the tendency to excessive regulation is noticeable. Two sentences may be quoted in illustration. "Ainsi les lectures des enfants sont toutes contrôlées, discutées, expliquées, indirectement réglées" (p. 265). "Heureux les enfants dont les lectures sont surveillées, partagées, contrôlées!" (p. 307). Yet, while he would check the unprompted reading of children, M. Perez is all for making literary education less severe. He would teach historical facts, for example, by a kind of dramatic games. He also proposes a method of "forming the young writer" by setting him to write compositions on himself and his own occupations and thoughts instead of on the customary subjects for rhetorical exercises. The art of literary composition, he thinks, might thus be learnt by children "en se jouant". To all this exception may be taken on several grounds, but especially on these two. First, according to what M. Perez has said with reference to music, is not the proper way of obviating the dangers that lurk in indiscriminate reading—unfavourable, as he considers it, to "reason and abstract judgments"—to give

apart from it a sufficient amount of not too easy intellectual discipline? Secondly, is minutely supervised and regulated play real play?

Les Principes du Droit. Par EMILE BEAUSSIRE, Membre de l'Institut. Paris: F. Alcan, 1888. Pp. vi., 427.

To this work the author's *Principes de la Morale*, reviewed in MIND xi. 272, is introductory. The idea of "right," he holds, must be based on the idea of duty; and this idea the theory of law has to take, without further investigation on its own account, from ethics. "Le devoir sert de base au droit comme l'espace à la géométrie. Le droit laisse à la morale le soin de remonter au delà du devoir, comme la géométrie laisse à la métaphysique le soin de remonter au delà de l'espace." The volume is divided into an Introduction (pp. 1-31) and three Books: i. "Théorie générale du Droit" (pp. 33-69), ii. "Droit public" (pp. 72-199), iii. "Droit privé" (pp. 202-420). In his Introduction the author seeks to maintain the conceptions of "state of nature," "social contract" and "natural rights," in senses defined by him. The "state of nature," in his view, is not a primitive state that preceded society, but a state that always persists side by side with the "legal state". It includes all those relations of men to one another and to that which is outside them that do not come under political control. Similarly, the "social contract" is not an agreement deliberately entered into when first the legal state was substituted for the state of nature, but is a tacit contract implied in the constitution of every society. The conception of "natural right" is required to give positive law its "legitimacy," as positive law is required to give natural right its "indispensable guarantees". The mutual relations between politics and natural right are thus defined. "Le droit naturel n'embrasse pas la politique, et il n'est pas embrassé par elle. Le premier devoir de la politique est de respecter le droit naturel, et l'un des objets principaux du droit naturel est de juger la politique, de l'approuver ou de la flétrir suivant qu'elle est juste ou injuste." The general principle which the author makes the foundation of his philosophy of law is that right is "the guarantee of duty". "The rights of man" "embrace all that each man needs to do or to possess in order to accomplish freely the moral law" (p. 46). "Life and liberty are logically the first of rights, since they are the first and the most constant condition of the accomplishment of duty" (p. 390). M. Beaussire, starting from divisions made by Grotius and Reid, divides rights into rights to "respect" and to "assistance". "So long as a man can by himself fulfil all his duties, he has only the right to fulfil them in peace (*i.e.*, to be respected in the fulfilment of them); but so soon as he cannot entirely suffice to himself, assistance is due to him, not for the sake of him personally, but for the sake of the law which governs him and of which all men are the subjects and ministers" (p. 53).

Esquisse d'une Philosophie de l'Être. Par J. E. ALAUX, Professeur de faculté, Professeur de philosophie à l'École des lettres d'Alger. Paris: F. Alcan, 1888. Pp. 105.

The author here presents a summary of a philosophical system which he hopes to develop at some future time. In its present form, he says, "c'est l'esquisse d'une tentative de renouveler la theodicée, qui, stationnaire, ce semble, depuis Leibniz, ou ne se développant que dans le sens du panthéisme, laisse tomber ceux que ne satisfait pas un insuffisant optimisme dans un pessimisme d'autant plus redoutable que la logique ne permet point de choix entre la foi en Dieu et le désespoir".

The relation of the author's doctrine to that of Leibniz is explained on pp. 82-4. His system is a monadism, according to which "each substance is the cause of the phenomena that reveal its own being, in virtue of the being that is in it, and under the excitation of other beings". The "law of being" at which he arrives is summed up thus: "Tout possible est une puissance propre, qui tend à l'être; tout réel est un conscient résultant d'une synthèse de deux termes contraires et identiques, un *moi* et un *non-moi* qui, suscités par Dieu et se suscitant l'un l'autre, se font, sous cette action du suscitateur suprême, exister l'un l'autre, de degré en degré, de réalité en réalité, d'être en être, jusqu'à la perfection de l'être, jusqu'à l'universelle communauté de vie en Dieu".

La Morale de Socrate. Par Mme. Jules Favre (*née* Velten). Paris: F. Alcan, 1888. Pp. iii., 328.

This is a companion volume to *La Morale des Stoïciens*, noticed in Mind xiii. 136. Translated passages from the *Memorabilia* and from Plato are arranged according to the general plan of the author's former volume; each group of extracts having for introduction a sketch of the teaching of Socrates on the particular point. The book is in two parts: i. "God—Duties towards God" (pp. 5-40), ii. "The Soul—Duties towards the Soul" (pp. 41-323). Socrates is viewed as the precursor of Christian morality.

Critique de la Raison Pratique. Par Emmanuel Kant. Nouvelle Traduction française avec un Avant-Propos sur la Philosophie de Kant en France de 1773 à 1814, des Notes philologiques et philosophiques, par F. Picavet, Agrégé de philosophie. Paris: F. Alcan, 1888. Pp. xxxvii., 326.

M. Picavet's edition, with preface, of Condillac's *Traité des Sensations*, was mentioned in Mind xi. 303. He here puts forth a translation of the *Kritik d. practischen Vernunft*, executed with characteristic care, and prefaced by a very interesting account of the appreciation that Kant had found in France before the time when, according to the usual statement, Kantian studies first begin. He shows that Kant's works were common subjects of discussion among French students of philosophy during the whole period treated of; that, from the appearance of the *Kritik d. reinen Vernunft*, its importance was recognised in France as in Germany; that, during the Revolutionary period, it was the usual remark of those Frenchmen who occupied themselves with Kant, that the *Kritik* was making a revolution in philosophy not less far-reaching than the contemporary political revolution; and that, when the exposition of Kant's philosophy by Villers appeared in 1801, protests justifiably made themselves heard on all sides against his assumption that French philosophers had neglected Kant. Thus, instead of coming at the beginning of the period of French occupation with Kant, Mme. de Staël, "the most illustrious of the writers who admired Kant or caused him to be admired," comes at the end of a period during which his doctrines had been repeatedly expounded and discussed. M. Picavet brings his sketch to a close with 1814, the history of Kantianism in France from that time being well known. After a page of final summary, he concludes with these sentences. "Nous nous demandons si l'on pourrait, vingt ans après l'apparition des œuvres capitales d'un Comte, d'un Spencer, d'un Darwin, trouver en Allemagne autant d'hommes célèbres à des titres si divers, qui aient tenté de les com-

prendre, autant de travaux importants qui aient eu pour but de faire connaître, d'apprécier les doctrines nouvelles, de mettre même en relief la valeur du penseur dont les conclusions auraient été combattues comme inexactes. Et cependant les contemporains de ces trois penseurs n'ont pas été mêlés à des événements aussi terribles et aussi peu propices à la spéculation que ceux dont ont été témoins les hommes qui vécurent de 1789 à 1814" (p. xxxvi.). To the translation are appended some valuable "Philosophical Notes" (pp. 297-323).

Etudes de Psychologie expérimentale. Par Alfred Binet. Paris: Octave Doin, 1888. Pp. 307.

Four studies by one of the most active and effective of French investigators: (1) "Le Fétichisme dans l'Amour (pp. 1-85); (2) "La Vie psychique des Micro-organismes (pp. 87-237); (3) "L'Intensité des Images mentales" (pp. 239-77); (4) "Le Problème hypnotique" (pp. 279-98); followed by a "Note sur l'Ecriture hystérique" (pp. 299-306). The third and fourth are of special value in relation to questions which the author himself has done as much as any man to invest with their present interest. The second is a very elaborate and careful study in a new field. In the first, certain morbid forms of erotic passion are brought under psychological law.

L'Hypnotisme et la Liberté des Représentations publiques. Lettres à M. le Professeur Thiriar, Représentant, Suivies de l'examen du Rapport présenté par M. Masoin à l'Académie de Médecine. Par J. Delboeuf, Professeur à l'Université de Liège, &c. Liège: Ch. Aug. Desoer, 1888. Pp. 111.

In these "Letters" Prof. Delboeuf utters a protest against the attempt that is being made in Belgium and other parts of Europe to suppress public representations of hypnotic phenomena. He contends both that the dangers of hypnotism have been exaggerated, and that the best means of guarding against those that really exist is publicity. Against the school of the Salpêtrière he maintains the position, defended by him on other occasions, that hypnotism is in no way connected with neurotic diseases. The phenomenon with which it can best be compared is ordinary sleep; and perfectly healthy subjects are often much easier to hypnotise than hysterical subjects. Hypnotic 'suggestion' is by no means all-powerful; and memory of what has passed in the hypnotic state "can be perfectly revived". That the practice of hypnotism should be legally restricted, as has been proposed, to medical men, would not prevent its abuse. It is, indeed, only by general knowledge of its effects that its dangers can be obviated. To establish the proposed monopoly would, besides, be to show ingratitude to those who, after all, were the means of forcing hypnotism on the attention of the medical profession.

Kritik der reinen Erfahrung. Von Dr. Richard Avenarius, Ord. Professor der Philosophie an der Universität Zürich. Erster Band. Leipzig: Fues's Verlag (R. Reisland), 1888. Pp. xxii., 217.

It is now twelve years since the author's *Philosophie als Denken der Welt gemäss dem Princip des kleinsten Kraftmaasses*, or "Prolegomena to a Critique of Pure Experience," saw the light (Mind i. 298). The present volume, which is the first part of the projected "Critique," has the importance of philosophical work that has been long meditated and carefully elaborated. Its form, which, as the author admits, presents

some difficulty, has been deliberately chosen. The use of symbols that characterises it, besides being adopted as a means of directing the attention to the facts of experience apart from any traditional scientific or philosophical way of looking at them (p. 15), is also connected with the author's conception of philosophy as the formulation of experience from the point of view of a disinterested spectator (p. 10). This conception requires, in his view, that consciousness should be temporarily abstracted from, and, accordingly, that the relations between the observed organism and its environment should be presented in a mathematico-mechanical form. A few elementary symbols having been selected to designate fundamental conceptions, the author proceeds, by constantly ramifying distinctions, to work out the relations of man to his surroundings, physical and social. The most important of the conceptions symbolically designated is that of "System C," or the part of the central nervous system that gathers up in itself the changes proceeding from the periphery, and distributes to the periphery the changes that have to be set going from the centre (pp. 35-6). The relation of the conservation of system C to the conservation of the organism having been formulated, the conditions are sought of the "vital conservation" of system C itself. Certain "fictions," such as that of "ideal surroundings" and of "the ideal system C in not ideal surroundings" are introduced, and the conditions of approximation to them investigated. After expressions have been found for the changes of system C and the conditions of its conservation (in less or greater degrees up to the "conservation-maximum") and of its destruction, the maintenance of the individual system C is considered in its relations to the corresponding systems of other individuals and their conservation. This leads to the formulation of the conception of the "congregal system," or "ΣC," the conditions of the maintenance and growth of which are then determined. The most favourable condition thinkable for the maintenance of the "total system"—whether C itself or ΣC—is found to be "when no partial system maintains itself by diminution, but each by augmentation of the vital conservation-value of others; so that that case would be designated as the *perfect relation* in which each single partial system should maintain itself perfectly under the greatest thinkable increase of the vital conservation-value of the greatest thinkable number of other partial systems, and in which accordingly the total system also should maintain itself perfectly under the greatest thinkable increase of the vital conservation-value of each single partial system" (p. 165). At the outset of the detailed analysis (p. 25), the question was put: "In what sense and how far can the constituent parts of our surroundings be taken as the presupposition of experience?" The result of the whole is summed up in a hypothetical answer to this question, given in the author's symbolical terminology, on pp. 199-200.

Kritik der Kantischen Antinomienlehre. Von Dr. Franz Erhardt. Leipzig: Fues's Verlag (R. Reisland), 1888. Pp. 83.

The author of this criticism of Kant's doctrine of the Antinomies, while recognising the solution Kant gave as "right in principle," aims at showing by detailed argument that the antinomies are "in themselves false". The rejection of the doctrine of the antinomies, he contends, does not weaken Kant's system; for the ground of the Kantian transcendental idealism is not in the doctrine of the antinomies but, if anywhere, in the Transcendental Æsthetic.

Alles in Allen. Metalogik—Metaphysik—Metapsychik. Von Ludwig Haller. Berlin: C. Duncker (C. Heymons), 1888. Pp. xv., 480.

This (incomplete) posthumous work is an attempt at a speculative doctrine in the spirit of Parmenides and Spinoza. It manifests a certain feeling for the larger constructions of philosophical thought, but is hardly articulate enough for anything definite to be said as to its outcome.

(1) *Ueber Kant's Zahlbegriff*, and (2) *Stuart Mill's Zahlbegriff.* Von Dr. Carl Theodor Michaëlis. Berlin: R. Gaertner (Hermann Heyfelder), 1884, 1888. Pp. 18, 18.

The first of these pieces is a criticism of Kant's theory of the foundations of arithmetic. The author finds that not arithmetic but geometry is the starting-point of Kant's critical investigations; that he arrives at certain philosophical results from the consideration of geometry, and then tries to bring his conception of number into harmony with these. When arithmetic is considered independently, it is seen that number is the expression of synthesis generally, while space and time are only expressive of synthesis in a special form (p. 13). The conclusion, as regards the relations of the mathematical sciences, is that "*geometry is applied arithmetic*" (p. 15).

The second piece is more a criticism of Mill as representing the traditional English philosophy than a special examination of his conception of number. The starting-point of philosophy, according to the author, ought to be a "reflection" (Besinnung) like that of Descartes and Kant, not empirical psychology, as with the English school (p. 16). While Kant's doctrine of number, although he has not rightly understood the nature of arithmetical synthesis, may be corrected by means of his own system, Mill's doctrine is fundamentally defective because based on empirical psychology.

Allerlei aus Volks- und Menschenkunde. Von A. Bastian. Erster Band. Mit 3 Tafeln in Lichtdruck. Zweiter Band. Mit 18 photolithographischen Tafeln. Berlin: E. S. Mittler & Sohn, 1888. Pp. xi., 512; cxx., 380.

No less comprehensive title than that which it bears could describe the wealth of material that is to be found in Dr. Bastian's latest contribution to the study of the minds of peoples. The second of the two volumes is illustrated by a series of plates (with explanatory text extending from p. 240 to p. 358), which may be regarded as a supplement to the ethnological atlas that accompanied the author's immediately preceding work (see Mind xiii. 306). The ideas selected for illustration are chiefly Buddhistic and Christian. There is nothing new in the way of theory, but the accumulation of facts by which the author seeks to exhibit his ideas in concrete form is perhaps more extraordinary than ever. In vol. i., pp. 465-504, he returns to the subject of Theosophy and "spiritistic hocus pocus" discussed by him at some length in a former work (Mind xii. 308).

Friedrich Ueberweg's *Grundriss der Geschichte der Philosophie.* Dritter Theil. "Die Neuzeit." Siebente, mit einem Philosophen- u. Litteratoren-Register versehene, Auflage, bearbeitet u. herausgegeben von Dr. Max Heinze, ord. Professor der Philosophie an der Universität Leipzig. Berlin: E. Mittler u. Sohn, 1888. Pp. viii., 568.

The two earlier parts of the latest (seventh) edition of this standard work were noticed in Mind xi. 588. The third part here follows, and

shows the same anxious care in the editor to keep up the character of the work as in every way the fullest and most serviceable History of the compendious class. The new matter incorporated adds 60 pp. to the size of the part as it stood in the sixth edition of 1883. A numerical statement of this kind, however, gives little notion of all that the editor has done for the book. While the additions are chiefly made in the fourth section devoted to the present generation, but are also considerable in the first which treats of the period of transition from the middle age, there are important changes in something more than the form of the second section. It was a serious defect of the book in English eyes that Hobbes and others were made a mere appendage to Bacon, and again Berkeley and others a mere appendage to Locke. The defect is now made good. Hobbes is set in the forefront of a new independent paragraph; Berkeley gets the like recognition, which was so clearly his due; and there is besides a special paragraph given to English Deism, before the old one given to the 18th century moralists headed by Shaftesbury. The paragraph-division remains what it was in the third section—from Kant to Beneke; but in the fourth there has been the same desire as in the second to give more distinctive prominence to philosophical movements that are—or in as far as they are—distinct. One can but admire the extraordinary industry, joined with discrimination, of the editor in his efforts to omit no bibliographical references of importance; on the philosophical journals especially he has kept his eye to excellent purpose and effect. It must be added that occasionally (as on p. 197) something is left to be desired in the accuracy with which titles of English books are printed.

Der Ursprung der Sprache im Zusammenhange mit den letzten Fragen alles Wissens. Eine Darstellung, Kritik u. Fortentwicklung der vorzüglichsten Ansichten von Dr. H. Steinthal, a. o. Professor für Sprachwissenschaft an der Universität zu Berlin, &c. Vierte, abermals erweiterte Auflage. Berlin: F. Dümmler, 1888. Pp. xx., 380.

This edition is not a little altered from the third of 1877 (see Mind ii. 276), but is hardly at all extended, as that one was so greatly beyond what went before it. The additions have reference to the recent linguistic work (from 1876), and occupy more than a hundred pages, for which room is found chiefly by curtailing the account of Geiger which made so prominent a feature of the third edition. They fall under four heads. (1) The evidence, especially that of the Schipka-jaw, for a speechless race of men in the far prehistoric past, is discussed at length (pp. 264-81). (2) Noiré's writings (from 1877) are subjected to a criticism not more trenchant than they need (pp. 281-319). (3) Wundt's views, as set out both in occasional and systematic form, are appreciatively considered (pp. 319-50). Finally (4), the position of the author and his school is declared, in relation also to other contributions to linguistic theory made within the last decade (pp. 350-80). If there is a certain discontinuity in the contents of the book, due to the manner in which it has been from time to time recomposed, there is certainly no want of freshness and vigour of treatment either in the new or in the older parts.

Die praktische Philosophie und ihre Bedeutung für die Rechtsstudien. Ein Beitrag zur Reform unserer Universitäten von Dr. Eduard Fechtner. Wien: A. Hölder, 1888. Pp. 87.

This, like Prof. Angiulli's book noticed in No. 51, p. 459, is a plea for assigning to philosophy a central position in the higher education. Dr. Fechtner, starting from Mill's saying as to the purpose of the university,

quoted also by Prof. Angiulli, goes on to protest against recent projects of reform that aim at dividing up university-education more and more into specialties without any bond of union. The true bond of union, he contends, is philosophy; and now that specialising has been carried so far, there is more need of philosophy than ever. It is the interests of the faculty of law that the author has chiefly in view. After insisting (with much support from distinguished jurists) on the importance of philosophy in general and ethics in particular for the scientific study of jurisprudence, he discusses in a last section (pp. 72-87) the question of the "philosophical propædeutic" in the Austrian Gymnasia. Here he finds himself supported in some of his special contentions by Dr. Meinong (see MIND x. 624), and in his general view of the place due to philosophical propædeutic in modern German education by Dr. Paulsen (MIND x. 312). He himself proposes to add ethics to the psychology and formal logic now taught in the Gymnasia, and would find a place for it by diminishing the mass of miscellaneous information which tends too much in modern education to replace the disciplinary subjects.

Die holländische Philosophie im neunzehnten Jahrhundert. Eine Studie von G. VON ANTAL. Utrecht: C. H. E. Breijer, 1888. Pp. 112.

A detailed historical study of philosophy in Holland in the 19th century. The author regards Dutch philosophy as tending to an intermediate position between "the idealistic philosophy of Germany and the empiristic philosophy of England". "In the first half of the century it is idealistic, in the second empiristic, or—if the expression is preferred —positivistic."

RECEIVED also:—

J. Rickaby, *Moral Philosophy*, Lond., Longmans, pp. viii., 376.
C. H. Hinton, *A New Era of Thought*, Swan Sonnenschein, pp. xvi., 217.
„ *Scientific Romances*, vii., viii., ditto, pp. 22, 17.
A. J. Bell, *Whence comes Man?* W. Isbister, pp. 353.
F. M. Müller, *Lectures on the Science of Thought*, Chicago, Open Court Publishing Co., pp. vi., 95, 28 (App.).
E. Pellis, *La Philosophie de la Mécanique*, Paris, F. Alcan, pp. 185.
E. Ferrière, *La Vie et l'Ame*, ditto, pp. 580.
J.-J. Gourd, *Le Phénomène*, ditto, pp. 447.
F. Picavet, *L'Histoire de la Philosophie, ce qu'elle a été, &c.*, ditto, pp. 48.
G. Cesca, *La Metafisica, &c., del Leibniz*, Padova, Drucker e Senigaglia, pp. 44.
A. Döring, *Philosophische Güterlehre*, Berlin, R. Gaertner, pp. xi., 438.
G. v. Gizycki, *Kant u. Schopenhauer*, Leipzig, W. Friedrich, pp. 112.
P. v. Gizycki, *Autoritäten*, Berlin, F. u. P. Lehmann, pp. 58.
E. Reich, *Schopenhauer als Phil. der Tragödie*, Wien, C. Konegen, pp. 139.
R. Schellwien, *Optische Häresien, erste Folge, &c.*, Halle-Saale, C. E. M. Pfeffer (R. Stricker), pp. vii., 108.
E. H. Schmitt, *Das Geheimniss der Hegelschen Dialektik*, ditto, pp. xiv., 144.
F. Lukas, *Die Methode der Eintheilung bei Platon*, ditto, pp. xvi., 308.
G. Küssner, *Kritik des Pessimismus*, ditto, pp. 53.
H. Siebeck, *Untersuchungen zur Philosophie der Griechen*, 2te Aufl., Freiburg i. B., J. C. B. Mohr (P. Siebeck), pp. viii., 279.
P. Natorp, *Einleitung in die Psychologie*, ditto, pp. 129.
A. Krause, *Das nachgelassene Werk Immanuel Kant's*, Frankfurt a. M. u. Lahr, M. Schauenburg, pp. xvii. 213.

NOTICE will follow.

VIII.—NOTES.

THE PAPAL CONDEMNATION OF ROSMINI.

As was announced at the end of the last No. of MIND, forty propositions of Antonio Rosmini-Serbati's have quite recently been condemned at Rome. According to the Decree, dated the 14th December, 1887,[1] most of the propositions are taken from posthumous works of the author. Some of them may therefore be considered as the expression of ideas not sufficiently matured. Nothing is more unjust (as J. de Maistre says somewhere, *à propos* of similar publications of Bossuet's) than to judge of a man's opinions by what has been published after his death. It is well that the fact was mentioned in the Decree; though, of course, the Congregation whose task it was to review and examine the works had nothing to do with the fact of their being posthumous; nor, indeed, with anything at all except the doctrines contained therein.

Of the forty propositions, only twenty-three have any philosophical interest. The first six relate to Rosmini's innate idea of Being and its relation to the Divine Substance. From Nos. viii. to xiii. we find propositions chiefly relative to the distinction of beings. Nos. xiv. to xvii. refer to creation; No. xviii. apparently denies freedom of will in God; No. xix. seems to confound the Divine Word with a sort of 'materia invisa'; and the rest of the propositions up to No. xxiv. relate to psychological questions.

Mr. Davidson, in his valuable work, *Rosmini's Philosophical System*, repeatedly states that the utmost care had been taken that the system should not lead to Pantheism. Rosmini "admits, indeed, that his *ideal Being* is an appurtenance (appartenanza) of the Absolute Being (*Theosophy*, i., §§ 455, &c., &c.), and that if this being were to put forth its own activity, and so complete and terminate itself, we should see God; but he adds, 'until this happen . . . we can only say . . . that in this life, certa, quamvis adhuc tenuissima forma cognitionis, attingimus Deum'. The self-manifest being, communicated to man, is not God" (*Rosmini's Phil. Syst.*, p. 206). Notwithstanding these assurances, if we take the following six propositions as they stand in the Decree, we can easily imagine that the Roman Congregation was afraid. It may well have thought that, in the language of the Jesuit F. Liberatore (*Inst. Phil.*, ii., p. 367),[2] "this system gives a handle to Pantheism," *ansam præbet Pantheismo:* and that was enough to condemn it. A Catholic system of philosophy must be beyond suspicion.

"i. In ordine rerum creatarum immediate manifestatur humano intellectui aliquid divini in se ipso, hujusmodi nempe quod ad divinam naturam pertineat."

How, we may ask, is this "aliquid divini" to be understood?—as a figure, or in its proper signification?

"ii. Cum divinum dicimus in natura, vocabulum istud 'divinum' non usurpamus ad significandum effectum non divinum causæ divinæ;

[1] Published at length in *The Tablet* newspaper, March 24th.

[2] What F. Liberatore says on the subject is well worth reading. The principal objections to Rosminianism are urged with a good deal of moderation, seldom to be met with when he encounters other adversaries.

neque mens est nobis loqui de divino quodam, quod tale sit per participationem."

So there is, according to Rosmini, something really divine in nature, "in ordine rerum creatarum," immediately manifested to man. Not manifested *as divine*, for then we should see God, and Rosmini, as we have said, energetically denies that. Still it is "aliquid divini," and it is "divinum natura," and this signifies neither 'springing from a Divine Cause,' nor even 'partaking of the Divine nature'. What does it then signify?

"iii. In natura igitur universi (id est, intelligentiis quæ in ipsa sunt) aliquid est cui convenit denominatio divini, non sensu figurato, sed proprio. Est actualitas non distincta a reliquo actualitatis divinæ."

This actuality is *in* the minds of men, part of their thoughts; since it appears to them as the idea of indeterminate Being, which makes up the whole tissue of mental activity. For—

"iv. Esse indeterminatum, quod procul dubio notum est omnibus intelligentiis, est divinum illud quod homini in natura manifestatur.

"v. Esse quod homo intuetur, necesse est ut sit aliquid entis necessarii et æterni, causæ creantis, determinantis ac finientis omnium entium contingentium: atque hoc est Deus."

The abstract indeterminate idea of Being is something of God; on the other hand, this same idea is part of the mind of man. Rosmini says that this is not God. But it is an appurtenance of the Divine Nature, and divine in its nature itself. And we can only say it is not God, because we do not *know* it as such: for in God there are no parts, and (at least *objectively* speaking) if something divine be identical with any human idea, then God is also identical with it. Further, it is said that this *aliquid divini* is *the same essence* in God and in the creature that possesses the idea:

"vi. In esse quod præscindit a creaturis et a Deo (quod est esse indeterminatum) atque in Deo (esse non indeterminato, sed absoluto) eadem est essentia".

It is impossible to convict Rosmini of Pantheism, after what he has written against that doctrine; but when, in spite of his evident orthodoxy, his system brings him to use such expressions as these, no wonder that people should suspect the system.

Next come (leaving out proposition vii., which is theological) the theses which treat of the distinction of beings, beginning with—

"viii. Entia finita quibus componitur mundus resultant ex duobus elementis, id est ex termino reali finito et eo esse initiali quod eidem termino tribuit formam entis".

According to F. Liberatore, Rosmini "alia de idea entis prædicat, quibus videri possit idea illa constitui tanquam aliquid Deo et mundo superius, quod deinceps in utrumque convertatur". And though the *univocè* of Rosmini is explained by Mr. Davidson very satisfactorily in a foot-note (*Ros. Phil. Syst.*, p. 344), it comes quite natural for us to take the "initial being" as the supreme genus, under which God and the creature come as two distinct species, contrary to what St. Thomas says in his *Summa contrà Gentiles*, i. 24, "Quod Deus non sit in aliquo genere".

"ix. Esse, objectum intuitionis, est actus initialis omnium entium. Esse initiale est initium tam cognoscibilium quam subsistentium; est pariter initium Dei, prout a nobis concipitur, et creaturarum.

"x. Esse virtuale et sine limitibus est prima ac simplicissima omnium entitatum, adeo ut quælibet alia entitas sit composita, et inter ipsius componentia semper et necessario sit esse virtuale. Est pars essentialis omnium omnino entitatum, utut cogitatione dividantur."

What is here meant by "Esse virtuale et sine limitibus"? The Infinite, or the Indeterminate Being? Both are "sine limitibus". If the first is meant, we find that all finite beings have the Infinite as a component part; which would be very heterodox. If the second, then God is composite ("adeo ut *quælibet alia* entitas sit *composita*"), which is hardly superior in orthodoxy to the first meaning.

Space fails for proper developments, but I cannot leave out the following propositions on the same subject:—

"xii. Finita realitas non est, sed Deus facit eam esse, addendo infinitæ realitatæ limitationem. Esse initiale fit essentia omnis entis realis. Esse quod actuat naturas finitas, ipsis conjunctum, est recisum a Deo."

To limit infinitude is self-contradictory. If the "esse initiale" is divine, and is *my* essence, then my essence ought also to be divine. How are we to understand this "recisum a Deo," if God is a being absolutely without parts? You cannot cut anything off from a mathematical point.

According to Rosmini, creation consists of three operations: the first is abstraction, and the second imagination; the third is the synthesis or union of the "esse initiale" (produced by abstraction) with the "esse reale finitum" (produced by imagination).

"xiv. Divina abstractione producitur esse initiale, primum finitorum entium elementum; divina vero imaginatione producitur reale finitum, seu realitates omnes quibus mundus constat.

"xv. Tertia operatio Esse Absoluti mundum creantis est divina synthesis, id est, unio duorum elementorum: quæ sunt *esse initiale* commune omnium finitorum entium initium, atque *reale* finitum, seu potius diversa realia finita, termini diversi ejusdem esse initialis. Qua unione creantur entia finita."

The next two propositions are of less importance; we may pass to—

"xviii. Amor quo Deus se diligit etiam in creaturis, et qui est ratio qua se determinat ad creandum, moralem necessitatem constituit, quæ in ente perfectissimo semper inducit effectum: hujusmodi enim necessitas tantummodo in pluribus entibus imperfectis integram relinquit libertatem bilateralem".

Here it is pretty plainly stated that God was morally obliged to create; and that this moral obligation did not leave Him practically free. Compare what Rosmini, quoted by Mr. Davidson, says (*Ros. Phil. Syst.*, p. 320):—"Being infinitely loves being. This love leads it to love being in all the modes in which it is lovable, in which it can be loved. . . . This love is the creative act. It therefore creates for itself, through the expansion of life, a lovable finite object, and this is the world. In order to create this world, it must first conceive it, both because this creative principle is intelligence, and because that cannot be loved which is not known; second, it must realise it, because, if it were not real in itself, the object of love would not exist, but would merely be possible, and what is loved, seen in its possibility, is desired to exist. Hence the two elements . . ." (*Theosophy*, i. § 460). This passage seems to point to the same conclusion as the Latin proposition; less explicitly, however. But any assertion against the freedom of God towards His creatures was naturally regarded, to use the words of the Decree, as one of those propositions that "veritati Catholicæ haud consonæ videbantur".

It is hardly necessary to mention proposition xix., which says, "Verbum (that is, the Divine Word) est materia illa invisa ex qua, ut dicitur *Sap.*, xi. 18, creatæ fuerunt res omnes universæ". The expression appears to illustrate the system very thoroughly; but the Church was not to be expected to let it pass. Rosmini was roughly handled by the Jesuits; but many Protestant divines would handle roughly anyone

who said that the world was made OF God. And the persecutions under which Rosmini succumbed, "not without suspicion of poison"[1] (as Mr. Davidson informs us) were hardly so undeserved as might at first sight appear.

Proposition xx. says it is not absurd for the human soul to be multiplied by generation: "non repugnat ut anima humana generatione multiplicetur"; whereas the Catholic Church of Rome asserts the contrary (S. Thom., *Summa cont. Gent.*, ii. 86, "Quod anima humana non traducatur cum semine"), because the immaterial soul cannot have been produced by mere matter. Rosmini admits the force of the argument, but thinks that the act of generation might give rise to a merely sensitive soul that afterwards, by development, is united to the "esse initiale," perceives it, and becomes immaterial: as he says in proposition xxi., "When Being can be intuited by the sensitive principle, this sole touch, this *union of itself*, raises the said principle (that before could only feel) up to a more exalted state, changes its nature and renders it intelligent, subsistent and immortal".

Proposition xxii. comes to pretty nearly the same as admitting two souls, one sensitive and the other intellectual, in the human body. "God might possibly separate the intellectual principle from the animated body, without the latter ceasing to be animate (animale): " but if "animale," there must remain some sort of "anima" or other. Was it there before, or no? If not, where does it come from now? If so, then there were two souls in man, existing together.

We find in proposition xxiii. a quasi-negation of the soul's immortality for all who do not belong to the supernatural order, or who are "in statu naturali"; their soul would be plunged in a deep sleep, and be eternally as if it did not exist. To minimise the consequences of this assertion, however, let us remember that, according to theologians, no man is, and no man probably ever was, "in statu naturali"; for Adam was created "in statu supernaturali," whence his fall could not degrade either him or his descendants. And proposition xxiv. affirms that the soul is not the substantial form of the body, but rather the cause of that substantial form—which is manifestly contrary to the teachings of the Church of Rome: "Forma substantialis corporis est potius effectus animæ, atque interior terminus operationis ipsius: propterea forma substantialis corporis non est ipsa anima. Unio animæ et corporis proprie consistit in immanenti perceptione, qua subjectum intuens ideam affirmat sensibile, postquam in hac ejus essentiam intuitum fuerit."

Such are the *philosophical* propositions condemned by the Congregation of Inquisitors-General—a sentence approved by the Pope, who has certainly followed the inquiry with the interest he takes in all philosophical matters. Leo XIII. is as ardent a disciple of St. Thomas as Rosmini was (or thought he was), and in now condemning Rosmini is

[1] One very naturally inquires *on whom* this suspicion fell. Not upon Rosmini of course, nor on his partisans and friends. Then?—Mr. Davidson is a staunch and loyal friend, but an adversary is not likely to get much justice at his hands. He admits in the work I have quoted that he has not read most of the controversial writings on the other side, "because they were published with calumnious intent". How could he possibly know that without having read them? Only by an act of faith in some third person's assertions; but this is not just, and does not give him the right to speak as he does. *Qui n'entend qu'une cloche n'entend qu'un son.*

not in the least influenced by the Jesuits, as was Pius IX. who refused to condemn him.

As before mentioned, these propositions are selected for the most part from Rosmini's posthumous works—works that he might, had he lived, have published in another form, and with salutary restrictions and safeguards. It may be that they have been chosen as they stand, without any regard to the context, and with a fixed determination of profiting by every unguarded expression that fell from his pen; but this supposition is not probable. Because a man is a Catholic, a priest, and even an Inquisitor-General, it does not follow that he is led by no principles of justice in judging his fellow-man; especially if this fellow-man is known to have lived like a saint, austere for himself, charitable to others, and zealous for the good of his Church.

The general note given to the collection of propositions is that they seemed (*videbantur*) not conformable to the teachings of the Church; nothing more. In ordinary cases, each proposition receives an appropriate mark or condemnatory note: 'unsafe'—'rash'—'dangerous'—'heretical'—'blasphemous'. Here, nothing of the kind. Was it because the examiners did not wish them to be considered as definitely condemned? We can scarcely suppose that. Was it not rather that, out of respect for the memory of so good a man, they did not like to give some of his propositions the mark which they deserved? Else, one does not see how propositions xviii. to xxiv. could in that case escape being noted as heretical.[1] We must suppose it was the intention of the Inquisitors to refrain from inflicting such a stigma. No one could help feeling sympathy for so deep a thinker as Rosmini, even when dissenting from his system. The question of the origin of ideas—or theory of cognition—is perhaps the most difficult in all philosophy; while, from its importance, it demands a solution more than any other. The Scholastic solution, according to my own opinion, is correct so far as it goes; but it has the defect of being merely a statement of the question in philosophical terms, leaving us no farther advanced after than before. This question Rosmini attempted to answer in an independent way; and in this attempt his principal merit consists.

It is not necsssary to dwell upon the feelings of Catholics in this conjuncture. Outsiders will generally feel indignant. That indignation ought, however, to have its limits. If the Church had asked Rosmini for a system of philosophy, and then sent it back as 'unsuitable' like the returned MS. of some unfortunate author, Rosmini might be pitied, but the Church could hardly be condemned. If it found that his theories were "Catholicæ veritati haud consonæ," it had not only the right but the duty to refuse them. Your tailor cannot force you to take a coat which does not fit, even though you have ordered it. But here there was no order given. No one had asked Rosmini to build up a system. He did it at his own risk, knowing that if he went seriously astray his doctrines might be 'reprobatæ, damnatæ, atque prohibitæ,' which simply means that the Church of Rome will have nothing to do with them. And whether in Rosmini's particular case there is much need for indignation may well be doubted. He had accusers: of course he had; otherwise his works would not have been examined. These accusers were unjust to him; lawyers on the opposite side usually are so. But he had defenders too, if I am not much mistaken, and judges who for many long years examined his doctrines with care.

FRANCIS WINTERTON.

[1] Cp. S. Thom., *Summa Th.*, 1ª 1æ. Quæstio lxxvi. "De unione animæ ad corpus".

ON BODY AND MIND.

Anything approaching a complete answer to Mr. Stout's questions in the No. of MIND for last July would involve a lengthy discussion; indeed, his questions seem to me in large measure unanswerable on any theory of the relations of body and mind. I can, therefore, only indicate what line of reply I should wish to have pursued in considering them, so far as they seem to offer objections to the particular theory set forth in my *Elements of Physiological Psychology*. In doing this I will adopt the numbers and order in which the objections of Mr. Stout were made.

1. Mr. Stout thinks that, in refuting materialism, I have implicitly refuted my own views. This is because, although I assert that the entire "doing" of material atoms consists in changing their relations in space to other material atoms, and deny that mental phenomena can be spoken of as the "product" of neural phenomena, I still maintain that we have ground for believing in the reality of the interaction of body and mind. That all physical phenomena, including those called neural, can be interpreted and indeed, as such, conceived of only in terms of motion, is an assertion, I suppose, which would command the assent of the entire system of modern physics—or, rather, if you please, the metaphysics of physics. But when I argue against the theory which considers mental phenomena as the "product" of neural phenomena (as I do at length in the third part of my book), I am emphasising my dissent from any of the several current uses of that word "product," as a term fit to summarise the relations which exist between body and mind. If Mr. Stout, or anyone else, wishes to defend the employment of this term, he must accomplish this by interpreting the term in some consistent and intelligible fashion. In other words, we cannot say that mental phenomena are a "product" of neural phenomena, unless we can show that this word is a fit one, in some special and definite meaning, to sum up the relations empirically shown to exist between the two. But if the word "product" be used as signifying that body and mind are interacting, that they fall under the great law under which reason brings all uniformity of observed sequences, then, of course, I too am an advocate of the view embodied in the word. Only I still consider the word, as currently used by all materialism, not only misleading but also utterly impossible to make intelligible. We may, for example, fitly call the physical resultant of a chemical combination of oxygen and hydrogen atoms, under given circumstances of temperature, pressure, &c., a *product* of those atoms; it is quite another matter, however, to use the given term for the relations between a state of consciousness, with its reference or referableness to an Ego, and the combination of those or other atoms.

But Mr. Stout throws his objection to my view into the form of the following question: "If the material atom as such does nothing but change its spatial relations, how can it act on something which is not in space at all?" (There may be lurking in the words "do" and "act" as here employed, an ambiguity; and to this point I shall refer again in a moment.) Now, if Mr. Stout means by the word "how" to ask me for a description of the *modus operandi* of the action of the atom, which is in space, upon the mind, which, according to the question, "is not in space at all," I cannot furnish an answer. Indeed, I hold that the question itself is idle and unanswerable. But the terms of his inquiry seem to be framed so as to suggest, or even to force, a negative answer. The answer required by the question seems to be: Such action *cannot* take place at all; it is inconceivable. But this conclusion is nothing but the declaration of the old Cartesian and post-Cartesian metaphysics. The truth is, of course, that all action and interaction are, ultimately con-

sidered, inexplicable mysteries—are just somewhat that has to be posited and left unexplained and resting on metaphysical necessities. We cannot for ever go on putting-in more mechanism to lighten up the mystery. At last we must rest in the confession, that the observed world, the world of phenomena, is underlain by a world of real beings, which act and are acted on by each other:—"how?" we know by discovering the uniform modes of their related action; but "how?" we know not, and never can know, if by asking we mean to inquire into the *modus* of interaction in general.

Now my theory amounts to the claim, that we need a real being called the "mind," in order theoretically or speculatively (if you will, metaphysically) to account for the sum-total of those phenomena called mental. That this mind is interactive with a certain system of material beings—the so-called atoms of the brain—is no more difficult to admit, on proper scientific evidence, than the interaction of the different elements of the material system. Both admissions are alike necessitated by facts; both quickly land us in the ultimate mystery of all interaction.

2. In answer to Mr. Stout's second objection, a brief mention of it, with a single hint, must suffice. I am judged inconsistent because I deny that there can be any "interchange of energy between brain and mind," and yet maintain interaction between the two resulting in a given direction of the bodily organs. Now I do not know precisely what Mr. Stout means by the term "interchange of energy". Properly speaking, there is no such thing as *interchange* (or *transitus*) of energy anywhere. What I do deny—and in this I suppose that the great majority of all materialists even would unhesitatingly agree with me—is, that the law of the conservation and correlation of physical energy can be maintained between states of consciousness and states of brain. To admit its existence here would disprove its accuracy in the sphere of body alone—just where it must be maintained, if we are to bring even the neural phenomena under it at all.

Mr. Stout seems to think that, by the foregoing denial, I render myself liable to suggest some "mode of interaction, which is not in like manner absurd". The particular mode which he thinks I am bound to advocate is, that the mind acts like "a condition of mechanical constraint". Now, here again I decline to be compelled either to abandon the view that mind and body interact at all or else to describe their "mode" of interaction. In some sense, my entire book is a description of the mode, or rather modes, of the interaction of body and mind. These modes are nothing but the uniform ways in which the two behave under their different relations to each other. More simply said, the uniform related ways of acting *are* their modes of interaction. Further than this, to ask after a "mode" is to raise the same old unanswerable inquiry. I can easily agree, then, with Mr. Stout when he says: "It is as difficult to conceive the soul acting as a condition of mechanical constraint as it is to conceive it receiving energy from the material system and returning it again". Both are so difficult of conception that both are quite inconceivable; and there is not the slightest real warrant for either.

3. Mr. Stout's last objection to the views of my book is by far, to me, the most surprising. He finds "serious ground for complaint" against me because I have nowhere taken account of the Kantian criticism. If this be true, I certainly cannot plead that I have sinned in ignorance: for several years it has been no small part of my annual task to study and teach the *Critique of Pure Reason*.

The particular matter in which I have not sufficiently deferred—so Mr. Stout thinks—to the *K. d. r. V.*, is in arguing "from the unity of

consciousness to the existence of a real unitary being as the subject of consciousness". This argument Kant is deemed to have sufficiently exploded. What argument Kant did really explode, so far as he aimed to explode any argument and accomplish his aim, is a matter to be discussed on other than the present grounds. But that I have repeated the inferences of the old rational psychology, which attempted to demonstrate the natural immortality of the soul by showing that it must be some kind of incomposite (and therefore indecomposable) monad or atom, I utterly disclaim.

The two places in my book where I have dealt at any length with, or even prominently assumed, the unity in reality of the mind, are the chapters on perception (Part ii.) and the chapter on the mind as a real being (Part iii.). In the chapters on perception, the metaphysical basis of the theory which I advocate (so far as this theory has any such basis), is substantially identical with a certain Kantian view advocated in the 'Deduction of the Categories'. This I feel called on to confess in deference to those of my critics who, unlike Mr. Stout, find that I take *too much* account of the Kantian criticism. That is to say, I hold that, back of all appearances, in consciousness, of one, or two, or of any other number of phenomenal things, stands the postulate of the unifying *actus* —the one-making power—of mind.

The definite treatment which I give in my book to the unity in reality of mind is very brief. As I understand it, this treatment differs almost *toto cœlo* from that argument of the old-fashioned rational psychology which Kant undertook to overthrow (to overthrow, at any rate, as a demonstration making and needing no appeal to faith). I say, indeed (p. 683): "It must be admitted that the question of the unity of mind has given rise to much fruitless and by no means pertinent debate". A unity in the substratum of mind, conceived of after the analogy of an incomposite material atom, even if such a conception were mentally possible, would throw no light on the unity of consciousness. To be self-conscious, to appear to oneself at all as having states or as subject of states, this *is* to be really one (a unitary real being), in the highest meaning which can be given to the words.

At the risk of seeming to speak lightly of a grave psychological and philosophical question, let me affirm: A wise man does not care whether he be reckoned as one or as more than one, according to the reckoning employed by the student of physics in counting up his atoms, or of the housewife in counting up her things. Thus to be a unitary real being (if it were possible) would be no boon, if one could not appear to one's self as one in consciousness. And thus to be two or more real beings would be little hardship, if one were still the subject of a rational self-consciousness.

Is it not I, my mind, that makes the one and the two, of the atoms and of the things? How have they number except as they get numbered, or set over against the mind?

In conclusion, let me say that Mr. Stout's courteous and searching questions convince me more than ever that metaphysics will creep into the study of mind (and ought to be cautiously and intelligently admitted as necessary to a theoretic treatment of the phenomena) from whatever point of view it be pursued.

George Trumbull Ladd.

EDMUND GURNEY.

At the end of last No. it was possible only to mention the death, so sudden and unexpected, of Edmund Gurney. For his years (41) he had given the world no ordinary means of gauging his powers, yet only his more intimate friends seem thus far to be aware that in him has been quenched one of the most richly endowed and strenuous spirits of this generation. He came of remarkable stocks on both sides: his mother a Northumbrian Grey; his father, the Rev. J. Hampden Gurney, son of Baron (of the Exchequer) Gurney, who was son and grandson of the two famous stenographers of that name in the last century. Before being settled in London as Rector of St. Mary's, Bryanston Square, his father resided for a time at Hersham, near Walton-on-Thames, in Surrey, and there Edmund was born on March 23, 1847, fifth in a family of nine children. After a somewhat irregular education as a boy, he entered Trinity College, Cambridge, as a minor scholar, and emerging as fourth classic in 1871 won a fellowship next year. It was no special predilection that turned him to classics rather than mathematics. His passion from boyhood was for music, and he had no sooner shown that he could do as well as others on one of the academic lines than he yielded to his natural bent, and for some years worked hard to attain, if he still might, an artist's command over the piano. But by this time there had awoke in him a deep reflectiveness upon human life, with a consuming desire to be of use to his kind; and if he toiled at music it was not so much for his own delight as with a hope of rendering himself able to help in brightening the lot of the common people. When it gradually became clear to his fastidious sense that the artist's power was not to be his, the inquisitive impulse, not less strong within him, found its opportunity. From 1876 he began to write in the Reviews on various aspects of the musical art, and finally his studies took systematic form in his great treatise *The Power of Sound* (1880), a book on the theory and general import of music that has no rival for penetrative force and sanity of view, with interest brilliantly sustained from first to last. Meanwhile he had been subjecting himself to discipline of another kind, partly in order to acquire the familiarity with physical science necessary for his musical inquiries, partly with a renewed hope of social service. He became from the end of 1876 a medical student, in London first, then longer at Cambridge, and again in London (from 1880) on reaching the more practical stage of the course. The discipline proved fruitful to him in many ways, both at the time and afterwards, but did not open for him at the end the field of activity in which he felt he could work to purpose. Neither did the study of law, to which his subtle intellect was drawn from 1881, and which for a time he prosecuted with characteristic ardour, avail to hold him fast; though it gave him an insight into the principles of evidence which he was soon to turn to account. It was the deeper questions of philosophy, and specially such as bear upon the conduct of life, that all the while were exercising him most; for about this time appeared, in MIND or elsewhere, the more remarkable of the essays—all of singular power—which he reproduced at the end of last year under the title *Tertium Quid: Chapters on various Disputed Questions* (see MIND No. 49, p. 152). At last, in 1882, the path disclosed itself upon which, as it seemed to him after all his varied experience, he might labour with real effect. For years before he had been associated with a number of friends in a course of private inquiry into the pretensions of so-called spiritualism. Without community of aim or prospect in the business, they acquired a common conviction that there was a large region of

abnormal human experience which, often taken into view and again dropt out of view in the past, called in these days for a systematic and continuous examination with the help of every available scientific appliance. The Society for Psychical Research was formed in 1882; and Gurney who, besides the necessary scientific and philosophic preparation, had the no less necessary leisure and also a mind sufficiently detached from the particular religious interests thought by some to be involved in the inquiry, threw his whole soul into the work, living thenceforth for hardly anything else. The results of his amazing energy of pursuit have gone on appearing in number after number of the Society's *Proceedings*, in the two large volumes of *Phantasms of the Living* (1886), and sometimes in MIND. Here he had ever the warmest welcome for his work in hypnotism, which equals the best that has been done in any country since that perplexing subject came finally under scientific treatment; nor is this the only contribution he has made in these last years to psychological science. But, over the grave into which a too passionate vehemence of quest has hurried him, what shall be said of that 'Telepathy' to which he and his associates have committed themselves as decisive outcome thus far of the conjoined labour in which his part has been the greatest? This may be said. If the world is in the end won to a conclusion so revolutionary of all common experience, not even Gurney's life will have been too heavy a price to pay towards its attainment. In the other event—if, that is to say, men after all find that they must remain in the future satisfied for all purposes with the kind of experience that has brought the race so far—then truly can his fate never cease to be deplored. There was so much else to be thought and said in these days which no man seemed to be in the same way marked out for subtly thinking and forcibly saying as he!

EDITOR.

THE ARISTOTELIAN SOCIETY FOR THE SYSTEMATIC STUDY OF PHILOSOPHY (22 Albemarle Street, W.).—The business meeting for the Ninth Session of the Society was held on June 11th. The Officers of the Society were re-elected, with the addition of Mr. Bernard Bosanquet, who was elected a Vice-President. Professor Wyndham R. Dunstan, V.P., was elected Editor of *The Proceedings* of the Society. The form of discussion known as 'Symposium' having met with approbation, three evenings instead of two will be devoted in the ensuing Session to discussions in that form. *The Proceedings* for the Ninth Session, including Report, List of Members, &c., are published by Messrs. Williams & Norgate, and are now ready. The first meeting of the ensuing (tenth) Session is fixed for Monday, November 5th, at 8 P.M., when an Address will be delivered by Mr. Shadworth H. Hodgson, President; subject: "Common-sense Philosophies". Program-cards for the Session may be obtained by applying to Mr. H. Wildon Carr, Hon. Secretary.

We note with regret the death of Professor G. Teichmüller at Dorpat in May last. Dr. H. Bonitz, the great Aristotelian scholar, has also recently died.

REVUE PHILOSOPHIQUE.—An. xiii., No. 7. H. Spencer—La morale de Kant. G. Tarde—La dialectique sociale (i.). A. Calinon—Les notions premières en mathématiques. G. Lechalas—Sur l'agrandissement des astres à l'horizon. Variétés (A. Gazier—Fragments de lettres inédites relatives à la philosophie de Kant, 1794-1810). Analyses et Comptes-rendus (D. G. Thompson, *The Problem of Evil;* F. M. Müller, *Biographies of Words*, &c.). Rev. des Period. Nécrologie (G. Teichmüller). No. 8. F. Paulhan—La finalité comme propriété des éléments psychiques. P.

Regnaud—Remarques sur l'évolution logique des différentes catégories du nom. G. Tarde—La dialectique sociale (fin). Analyses, &c. (K. Pearson, *The Ethic of Freethought*, &c.). Rev. des Périod, &c. No. 9. A. Binet—La responsabilité morale. C. Secrétan—Questions sociales : ii. Le luxe. P. Malapert—L'amour intellectuel d'après Spinoza. Analyses, &c. Notices bibliog. Soc. de Psych. physiol. (Dr. Dufay—Contribution à l'étude du somnambulisme provoqué à distance et à l'insu du sujet).

La Critique Philosophique (Nouv. Sér.).—An. iv., No. 5. V. Egger—Le sommeil et la certitude; le sommeil et la mémoire; examen des théories de M. Delboeuf. J. Chancel—De la certitude judiciaire (fin). L. Dauriac—Névropathes et aliénés. . . . No. 6. W. James—Ce que fait la volonté. . . . C. Renouvier—La nouvelle école du droit pénal en Italie. &c. No. 7. F. Lequier—Dialogues sur le libre arbitre (suite). . . . C. Renouvier—E. Clay et Tolstoï : la morale néobouddhique, la charité absolue. . . . No. 8. F. Lequier—Dialogues, &c. . . . C. Renouvier—Quelques remarques sur la théorie de la volonté de M. W. James.

Rivista Italiana di Filosofia.—An. iii. 2, No. 1. V. Benini—Dell' analogia considerata dal punto di vista logico e nelle sue applicazioni. G. Pélissier—Due frammenti inediti dell' epistolario di Leibniz. F. Puglia—Di alcune inesattezze negli studî di sociologia. A. Martini—Un nuovo compendio di storia della filosofia (da C. Cantoni). A. Marconi—La filosofia nei licei italiani. Bibliografia, &c.

Rivista di Filosofia Scientifica.—Vol. vii., No. 3. F. Pietropaolo—Sulla filosofia di Galluppi. P. Galluppi—Lettere inedite. E. Tanzi e G. Musso—Le variazioni termiche del capo durante le emozioni. G. Cesca—Dimostrazione dell' esistenza della 'cosa in se'. Riv. Gen., &c. No. 4. G. Bunge—Vitalismo e meccanicismo. V. Valeriani—Il principio d'identità e l'apriorismo nella filosofia scientifica. F. Puglia—Le leggi di composizione e decomposizione delle aggregazioni sociali umane. Riv. Gen., &c.

Zeitschrift für Philosophie, &c.—Bd. xciii., Heft 2. H. Siebeck—Die Anfänge der neueren Psychologie in der Scholastik. C. Hartenstein—Ueber die Lehren der antiken Skepsis, besonders des Sextus Empiricus, in betreff der Causalität. C. Gross—Die Gleichheit der Subjekte. Recensionen.

Philosophische Monatshefte.—Bd. xxiv., Heft 9, 10. Th. Lipps—Psychologie der Komik (ii.). J. P. Becker—E. Zeller's Angriff auf das Moralprincip Kant's. P. Natorp—Thema u. Disposition der aristotelischen Metaphysik (ii.). R. Eucken—Der Neuthomismus u. die neuere Wissenschaft. Recensionen. Litteraturbericht, &c.

Vierteljahrsschrift für wissenschaftliche Philosophie.—Bd. xii., Heft 3. G. Heymans—Zur Raumfrage (i.). J. v. Kries—Ueber den Begriff der objectiven Möglichkeit, &c. (ii.). A. Meinong—Ueber Begriff u. Eigenschaften der Empfindung (i.). C. Sigwart—Eine Rechtfertigung. Anzeigen.

Archiv für Geschichte der Philosophie.—Bd. i., Heft 4. H. Diels—Zu Aristoteles' *Protreptikos* u. Cicero's *Hortensius*. O. Kern—Empedokles u. die Orphiker. P. Wendland—Philo's Schrift *Περὶ τοῦ πάντα σπουδαῖον εἶναι ἐλεύθερον*. H. Siebeck—Zur Psychologie der Scholastik. L. Stein—Handschriftenfunde zur Philosophie der Renaissance. L. Stein—Neue Aufschlüsse ueber den litterarischen Nachlass u. die Herausgabe der *Opera posthuma* Spinoza's. C. I. Gerhardt—Zu Leibniz' Dynamik. A. Chiappelli—Zu Pythagoras u. Anaximenes. Jahresbericht (E. Zeller—Plato, 1886, 7 (ii.). P. Wendland—Kirchenväter, 1886, 7).

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